WATER RESOURCE USE

A MATTER OF PERSPECTIVE:

A CASE STUDY OF THE KAITUNA RIVER CLAIM, WAITANGI TRIBUNAL

a thesis

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Finally in the words of Barbara Kennedy, A Naughty World:
"Never mind the quality, feel the width"

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abstract

The thesis investigates how a Pakeha cultural perspective came to dominate water resource use and management to the exclusion of Maori spiritual and cultural values. This thesis examines through a case study of the Kaituna River claim, how in solving Rotorua's sewage disposal problems, why only the values of the Pakeha culture were considered. With increasing attention being focused on the development of bicultural policies for resource management, the findings of the Waitangi Tribunal provide a useful starting point. The claim by Ngati Pikiao challenges the underlying philosophy of water resource management held by the dominant culture.

The roots of the Pakeha perspective are outlined together with a resource management world view of the Maori. By so doing, it will be shown that traditional Maori and present Pakeha values are complementary. The findings of the Kaituna River claim show that it is possible to resolve problems in a bicultural fashion and this may have important implications for the future. New legislation, such as the State-Owned Enterprises Act 1986, the Environment Act 1986, and the Conservation Act 1987 are now required to take the Treaty of Waitangi into account therefore ensuring that Maori values will be accounted for in legislation. It is pertinent, therefore, to examine those values held by Pakeha in relation to water resource use so that the problems of the past, such as those illustrated in the Kaituna River claim may provide alternative solutions for future resource management problems.

CHAPTER ONE

INTRODUCTION

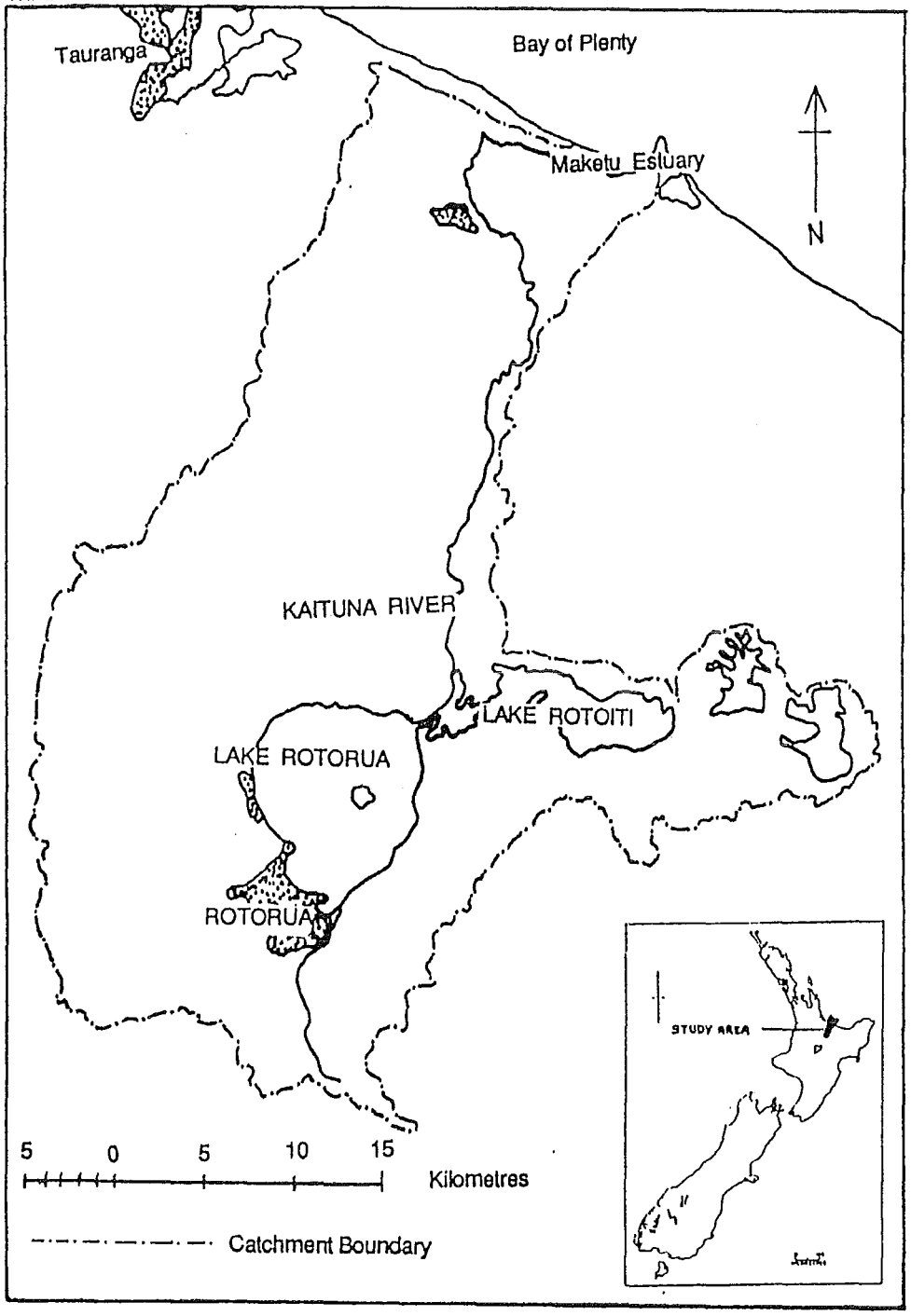
1.1 INTRODUCTION

In 1978, Rotorua City and its related effluent disposal problems became the focus of a claim put before the Waitangi Tribunal by a local Maori tribe, Ngati Pikiao. It was claimed that a proposal to transfer the discharge of Rotorua City's treated effluent from Lake Rotorua to the Kaituna River was in direct contravention to Maori spiritual and cultural values (see Map 1.1). The findings of the Waitangi Tribunal regarding the claim by Ngati Pikiao has particular relevance to water resource use and management given the present situation with the current Labour Government embarking on widespread economic, social and environmental reforms.

It is the intention of this thesis therefore, through a case study of the Kaituna River claim, to explore the effluent disposal problems of Rotorua City as being representative of a dominant cultural perspective of water resource use. By incorporating those Maori perceptions of water into the legislative system, not only will the need to take account of Maori values in statutes be solved but in some cases the present water resource management system may be reformed. Furthermore, it will be shown that the conflict between Maori spiritual and cultural values and that of the dominant culture, in terms of water resource use and management, is the result of an institutional bias which can still be found in legislation, past and present.

The Kaituna River claim, is representative of those grievances and injustices suffered by the Maori which started almost as soon as the Treaty of Waitangi was signed in 1840 (see Orange, 1987). It was not until the early 1970's that Maori rights gained a sufficiently strong and unified voice to carry over a blithely ignorant Pakeha population. The 1970's heralded what has often been coined the period of 'Maori Renaissance' (King, 1975; Sorrenson, 1981; Sinclair, 1986). A new generation of Maori, urbanised and educated, began pressing for

MAP 1.1 LOCATION MAP



separatism under *mana Maori motuhake.* This slogan, born in the nineteenth century and taken up by the Maori King, Tawhiao, following the wars of the 1860's, has found expression in the present situation. It is concerned with Maori self-determination, and having the status and ability to be the architect of one's own destiny (Stokes, 1985).

International events served to illustrate the injustices suffered by the Maori - the post war decolonisation of Africa, Asia and the Pacific, the growth of the United Nations and its agencies, especially those dealing with the question of human rights, and the Black Power movement in the United States (Orange, 1987). More recently there have been several major advances in the interpretation of treaties between indigenous peoples of Canada and the United States and their related agencies thus highlighting the position of the Maori (see Bartlett, 1980). 1975 saw the largest public protest by the Maori when over 100,000 marched on Parliament with a Memorial of Rights demanding "... not one more acre of Maori land to be alienated" (Williams, n.d). In that same year, as a response to the continuing vocal and sometimes violent protestations, the Government passed the Treaty of Waitangi Act 1975 which allowed a limited response to those contemporary Maori grievances occurring post 1975 to be heard before a Tribunal set up under the Act. The responsibility of the 'Waitangi Tribunal' was then to make a finding on claims lodged and issue appropriate recommendations to the Crown.

The Tribunal was immediately suspected of being another 'gesture' by a government merely engaging in 'window dressing' without addressing the real cause of the problems (Orange, 1987). This suspicion gained substance when the incoming National Government delayed in setting the Tribunal up. However in 1985 the Treaty of Waitangi Amendment Act was passed, enlarging the Tribunals terms of reference back to the signing of the Treaty. In doing so the Tribunal was then able to examine those grievances, and make recommendations in the light of injustices occurring from 1840. While the Tribunal to date has reported back on

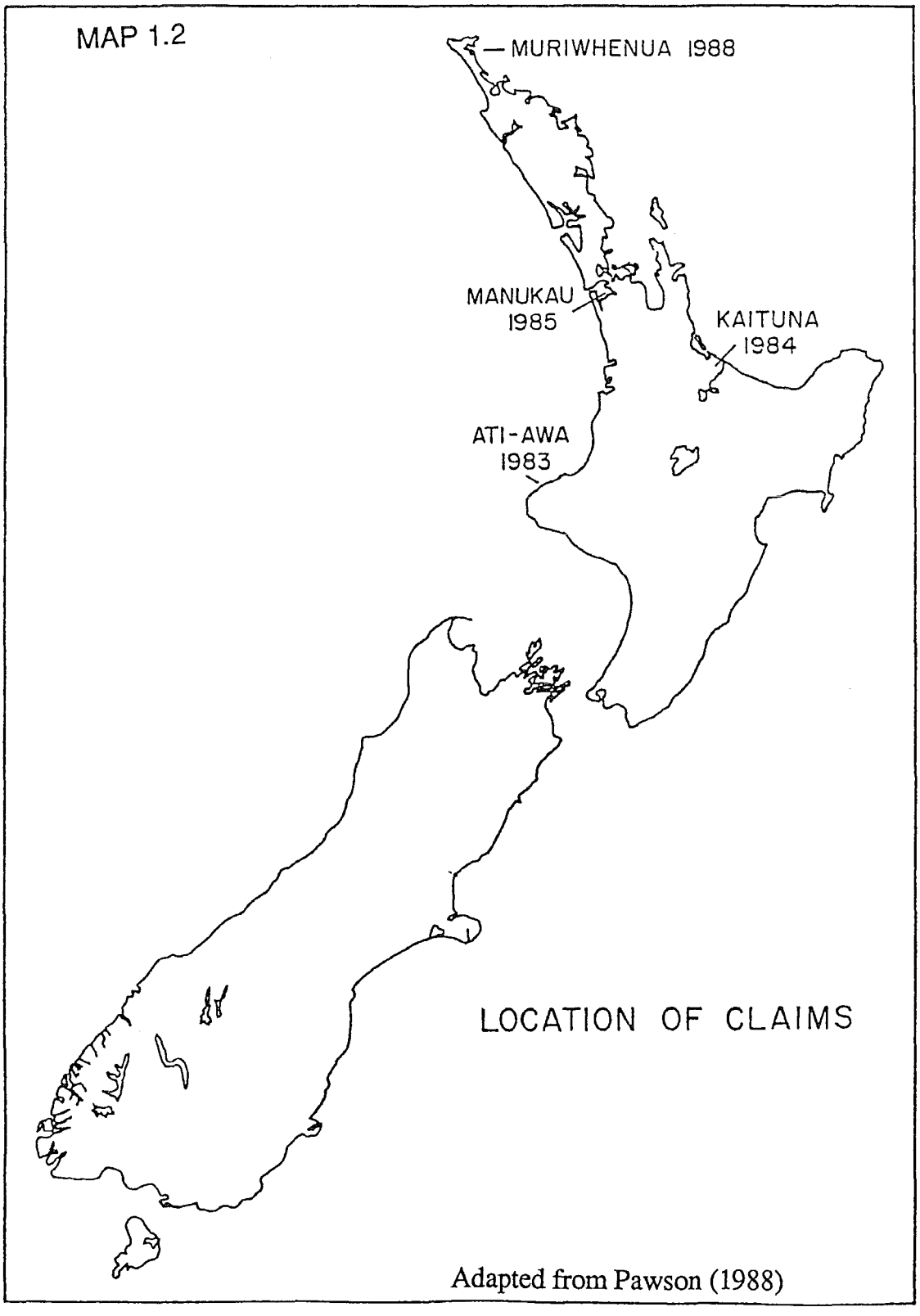
only a small number of issues relative to the number of claims now lodged, its findings have shown that resolutions to the various conflicts can be found.

The early claims filed before the Waitangi Tribunal; Manukau (Wai. 8), Te Atiawa (Wai.6) and Kaituna (Wai. 4) dealt specifically with treated effluent being discharged into water held to be spiritually and culturally sacred by the local Maori of each region (refer Map 1.2). The specific reason for those claims regarding water and the use thereof, rather than the more contentious land issues and ensuing historical implications was that the Treaty of Waitangi Act did not allow the Tribunal to investigate any claims related to policies and practices current in, or arising after, 1975. The claims highlighted though major deficiencies in the prevailing philosophy of water resource use and management.

When the Kaituna River claim was filed before the Waitangi Tribunal on the 30 January 1978 by Sir Charles Bennett and other members of the Ngati Pikiao tribe, it was the first claim lodged which seriously challenged the right of the dominant culture to use water as a means for waste disposal. The right to do being part of the philosophy of the dominant culture and as such, became enshrined in Section 21(2) of the Water and Soil Conservation Act 1967.

The claim was prompted by an inherent bias in New Zealand's legislative and planning system. Furthermore it showed the inability of formalised institutional structures to recognise and hence implement, Maori spiritual and cultural values when determining competing water resource uses (see Minhinnick v Auckland Regional Authority, 1982). A second bias revealed in the Kaituna River claim hearings, relates to that philosophy of the dominant culture which allows water to be used for the discharge of waste. It became a question of determining what was the most appropriate method for waste disposal, given the number of options which existed. Hence the process of decision making was restrictive for the following reasons:

(1) The legislative and planning system in relation to water resource use did not take


MAP 1.2
— MURIWHENUA 1988
MANUKAU
1985
KAITUNA
1984
ATI-AWA
1983
LOCATION OF CLAIMS
Adapted from Pawson (1988)

adequate account of Maori spiritual and cultural values.

(2) The currently held philosophy regarding water resource use and management is outdated and reflects only those values held by the dominant culture.

However, in becoming involved in what can be classified as 'Maori research' there exist many pitfalls in which, to the culture 'being researched', can often appear grossly insensitive. Stokes (1985) puts forward the argument that research for the sake of knowing is pointless:

> "There should be more specific aims and objectives in Maori research which are directed at helping people in their daily lives. This suggests that the traditional academic stance of the detached observer (or even participant observer in many cases) who takes no responsibility for the "consequences" of what now may be known as a result of the research, is insufficient" (p.3).

The danger which Stokes alludes to is that the approach of 'detached observer' employed in academic research, is not in most cases, either an appropriate or satisfactory method for Maori research. The implication therefore is that there is a 'Maori' way of doing things and it is this which should be followed. In advocating such a position it should be realised that there exist many routes to a chosen end. In the light of this, the following section will show that in exploring the roots of a particular Pakeha perspective regarding water resource use, a system of management might emerge which is more representative of a bicultural approach.

1.2 A CASE FOR BICULTURAL RESEARCH

The study of Maori tribal territory and its associated perceptions has a high potential for geographic research. It is, however, often beset with difficulties and has the potential for conflict (Murton, 1987; Stokes, 1985). The theme permits attention to be directed towards land and society, the essence of much geographical enquiry, and to a range of problems which are at the interface of social and cultural conflict in New Zealand today. Yet the issues are even

more complex than what appears at first glance as there is involved two very different ways of thinking about nature and society, two very different world views (Murton, 1987). This is exemplified in the way in which Ngati Pikiao view their tribal territory as opposed to a western geographic description of mountains, plains and rivers. The territory in Maori eyes is shaped like a taha - a gourd or calabash. The wide interior lands of the volcanic plateau and Rotorua lakes are the body, with the neck being the Kaituna River running down to the Maketu Estuary [(Wai. 4, para.3.2) refer Map 1.1].

Maori is the term used to differentiate the indigenous people of New Zealand from the Pakeha, that being the non Maori, usually of European descent. The 1974 Maori Affairs Amendment Act defined a person as a percentage of Maori blood (McCarthy, Metekingi and Poole, 1980). This definition was by nature restrictive and does not convey the true meaning of a culture. Taylor (1891; cited in Asher 1980) defined culture as "... that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man (*sic*) as a member of society" while Metge and Kinlock (1978) use the phrase "a system of shared understandings". Stokes (1987) argues that it is better to define Maori as a state of mind, a particular world view, having its own geography and history. It is this definition of Maori which now forms the basis of the present definition of Maori in the legislation.

Criticism has been levelled at Pakeha researchers who in recent years have made substantial contributions to Maori research and development. Stokes (1985) argues that the traditional academic stance of the detached observer favoured by most University based Pakeha researchers may not be appropriate for taha Maori;

> "There is an increasing awareness in the Maori world that Maoris have been guinea pigs for academic research; and that Maoris have not gained a great deal by this process" (*Ibid*)

King (1985), in sketching the change of climate within Maori research over the past two decades, found several inconsistencies with this argument. In 1971 Maori radicals were pointing out that Pakeha scholars had neglected Maori research. Through the 1970's Pakeha researchers set out to redress this imbalance but by the 1980's other Maori radicals were arguing that the Pakeha should not be involved in Maori research at all. The question arises as to who has the right to be involved in this field of cultural geography?

Stokes (1987) believes that a geographical analysis of cultural relationships between Maori and Pakeha must first come to terms with conflict over resource allocation and use and how historical grievances have affected tribal Maori society. Maori attitudes to research can be summarized as follows:

- Research should help the people being researched.
- Existing research is merely descriptive and adds nothing to the Maori people in understanding themselves.
- Much research serves to reinforce negative stereotypes.
- Research must be focused on values that can be transferred to young Maori.
- Maori research must identify the Maori world-view, not only for Maori but for Pakeha as well.
- It must investigate ways in which Maori cultural, economic and social resources can be more positively and effectively used.

Stokes (1985) then offers some criteria for would-be researchers involved in Maori research: the researcher must be closely involved in these experiences; researchers must have knowledge and experience in the Maori world and have the appropriate skills to investigate and articulate clearly, and to communicate the information that is needed to confront these issues. Such researchers may be Maori or Pakeha an it is important that the researcher can operate

comfortably in both cultures, is bicultural and preferably bilingual.

This in a sense presents only half the picture as the issues involved relate to not one culture but are bicultural in nature. There exists in 'Maori research' literature, a gap at the interface between Maori and Pakeha values and perceptions of their shared environment (see Phillips, 1987). A plethora of information exists regarding how the European developed their cultural perceptions of that landscape, how they proceeded to imposed them, and how those values and perceptions developed over time. However, literature concerning interaction of both the Maori and Pakeha attachments to land and water have tended to be more limited, concentrating instead on the physical conflicts between the two cultures (see Sorrenson, 1975). This problem has been further exacerbated by a difference in the communicating medium used. The Pakeha relied heavily on the written word while the Maori maintained an oral tradition. As a result the environmental perceptions of the Maori and Pakeha remained separate and hence developed, rather than in harmony, in isolation of each other with one eventually assuming dominance over the other through weight of numbers. It is imperative therefore, in order to increase understanding between the Maori and Pakeha cultures that these differences in perception be outlined and common ground found and explored.

It has been argued (Capra, 1982; Schumacher, 1973) that the remedy for the present environmental predicament lies in a change of values. However in proposing such a remedy there has been no accompanying practical guidance on how such a change is to be achieved.

> "Witness the endless, insipid, impotent discussions about values, in which pretentious and sentimental claims are made to the effect that if only we changed our hearts a little and became more charitable to each other, all will be well" (Skolimowski, 1981 cited in Pepper, 1986, p.5).

It is the contention of this thesis that practical guidelines concerning water resource use and management can be found when those values of the dominant culture are revealed and

understood. In exploring what could be understood as the dominant philosophy of water resource use, there is created an opportunity for new management structures to be advanced. It becomes not so much a change of value systems from that of Pakeha to traditional Maori, but the incorporation of those values which suit the cultural needs of both peoples. Exhibited in the Kaituna River claim was the problem of institutional structures put in place by the dominant culture which became inadequate in dealing with current water resource management issues. It is important therefore to examine those institutions and structures set up by the dominant culture in order to determine what the prevailing perception is.

The language of the Waitangi Tribunal's recommendations, as well the rhetoric of much of the testimony, highlights the need for research on contemporary Maori resource and environmental cognition and perception. Again this gap in literature is highlighted by the paucity of major substantive works in this area of concern (Murton, 1987). In geographical literature elsewhere in the world, attempts to understand how different cultures organise their universe spatially and environmentally are common (Brokenshea, Warren and Weiner, 1980; Klee, 1980; Maeten, 1986; cited in Murton, 1987). Certainly in a bicultural society like New Zealand's where the Treaty of Waitangi supposedly gives Maori values equal standing with British values, much interactive research is needed to educate all New Zealanders. Geographers can play an important, even essential role in this research (Murton, 1987).

3.3 THESIS STRUCTURE

In the pursuit of a bicultural approach to water resource use and management this thesis has four main objectives - to show that:

(1) The institutional structures governing water resource use and management have been put in place by the dominant culture and are therefore representative of only its values.

(2) To show that those structures are related to a value system of water resource management which does not reflect a bicultural society.

(3) To show that Maori spiritual, cultural and traditional values have legitimacy.

(4) To show that Maori spiritual, cultural and traditional values are not inimical to development and furthermore are complementary to the present conservation principles espoused in legislation.

To achieve these objectives, the Kaituna River claim will be used as a case study providing an example of those perspectives of the dominant culture and secondly outlining those world views views of the Maori applicable to water resource use and management. Reference will also be made to the Manukau and Te Atiawa claims thereby showing that the Kaituna case study is representative of a wider problem.

Chapter Two will outline the case study of the Kaituna River claim which is essentially concerned with the sewage disposal problems of Rotorua City. The problem will firstly be examined from an historical perspective with subsequent responses being discussed. This will then culminate in the Waitangi Tribunal hearing in 1984. The chapter concludes with a discussion of the decisions reached regarding future effluent disposal options after the Waitangi Tribunal hearing. The underlying question which is being asked in this chapter is why the effluent disposal problem in Rotorua ever had to reach the Waitangi Tribunal?

Chapter Three explores that dominant cultural perspective of water resource use and how it found expression in the Kaituna River claim. The chapter begins with a brief discussion of western views of science and technology, and then relates this to the New Zealand environmental experience. The historical perspective continues with a section discussing the development of a water resource use strategy culminating in the Soil Conservation and Rivers Control Act 1941 and the Water and Soil Conservation Act 1967. The chapter concludes with a discussion of the institutional structures formed by the above pieces of legislation and how by the Kaituna River claim the prevailing system of water resource management was

challenged.

The objectives of Chapter Four are threefold. The first is to explore and explain the basis of, and origins to, Maori spiritual, cultural and traditional values of the environment, especially in relation to water resource use and management. The second objective builds on this foundation and explores the basis for including Maori values in legislation. Furthermore, contemporary developments in case law will be traced from 1877 to the present day illustrating that Maori values have legitimacy. The third objective which underpins the other two, will argue that the inclusion of Maori values are not inimical to development and are not at odds with the current movement of the resource legislation review.

Chapter Five will examine the Manukau and Te Atiawa claims in relation to that of the Kaituna. By doing so, it will be explained how it was that a solution was reached in the Kaituna River claim and not yet apparent in the others. The underlying theme running through this chapter is that solutions are often obscured and hard to define due to competing sectional interests within the community. This chapter outlines the case that water resource use is not based so much on 'a wise use of the resource' but more on 'whose interests have greater weight' in the community. The chapter concludes with a discussion on options which enable competing interests to be accommodated in water use based on the findings of the Waitangi Tribunal in the Kaituna River claim.

Chapter Six will conclude the thesis with a discussion of the present movement in the reform of environmental legislation in New Zealand and how Maori spiritual, cultural and traditional values are being incorporated into an overall environmental management framework. It will be shown that by exploring a Pakeha perspective of resource utilisation, a foundation will then exist for bicultural involvement in water resource management. In doing so it can be seen that a new philosophy has emerged which has moved New Zealand closer

towards the goal of biculturalism.

CHAPTER TWO

THE SEWAGE DISPOSAL PROBLEM OF ROTORUA CITY: THE KAITUNA RIVER CLAIM

2.1 INTRODUCTION

> "I along with most other New Zealander's have been aware for some time that there has been a water quality problem in Lake Rotorua. On looking into the issue it became very clear to me that the deterioration in the water quality over the past twenty years or so had reached a point where firm remedial action must be taken. A decision on what this action is to be, must be made, and steps taken to restore the lake, as near as possible to its natural state. The lake can then be available to local people and visitors for their unrestricted use, pleasure and enjoyment; thus bringing to an end an unsatisfactory and unacceptable state of affairs that has drifted on for years, with progressive deterioration of the lake water and environment"
> (The Hon. M Connolly, Minister of Works and Development, 1975).

The objective of this chapter is to examine firstly the problem of sewage disposal for Rotorua City and secondly explain how it was that the problem reached the Waitangi Tribunal. The history of sewage disposal in Rotorua will be briefly discussed in order to provide some background to the issues relating to a proposal concerning the diversion of Rotorua's treated effluent via a pipeline into the Kaituna River. Following from this, the responses of the various agencies who are concerned with the deterioratation of water quality in Lake Rotorua will be examined, leading up to the Waitangi Tribunal hearing in 1984. The findings of the Tribunal will subsequently be outlined and then the responses of those groups involved will be re-examined. Although the problem of sewage disposal for population centres is a continual one, the sewage disposal problems of Rotorua which is the focus of this chapter, begins in the 1960's when it was first realised that Lake Rotorua's water quality was in decline. It was thought that the treated effluent discharged into the lake from the city was the major contributing factor.

2.2 THE PROBLEM

Sewage collection, treatment and disposal for the Rotorua district area, has until relatively recently, been fragmented and often developed by separate government agencies with no overall management strategy. With an increase in tourism development by the state government, combined with a burgeoning forest industry, the region's population increased at such a rate that the existing sewage systems could not cope with the pressure placed upon them. However it has not solely been the historical component of sewage treatment which has influenced the deterioration of lake water quality.

The sewage disposal problem also has its genesis in the city's geographic location. Rotorua City lies beside Lake Rotorua, the largest of the inland lakes in the Bay of Plenty. Because of the city's inland location, disposal has primarily been water based and into the lake. The following sections will therefore put into context both the geographical and historical components of effluent disposal in Rotorua.

2.2.1 Physical Location

Rotorua City is located in the Bay of Plenty, North Island, New Zealand. It is situated on the edge of the Volcanic Plateau in the Rotorua Caldera Basin. The city lies on the southwest shore of Lake Rotorua and is the principal population centre in the Kaituna catchment area. Other major settlements include Te Puke and Tauranga in the north (Map 1.1).

The Kaituna River catchment covers an area of 128,400 hectares in the western Bay of Plenty. It includes as major subcatchments the Rotorua basin and tributary streams, the Kaituna River flowing from Lake Rotoiti at Okere, together with the Mangorewa River as the main tributaries in the Paengaroa and Te Puke areas (Nairn, 1975). The Kaituna River catchment contains four lakes, Rotorua, Rotoiti, Rotoehu and Rotoma. Lakes Rotorua and Rotoiti are connected by the Ohau Channel which has been straightened and widened by catchment control works (see Map 2.1).

MAP 2.1 MAIN WATER SYSTEM OF ROTORUA AND KAITUNA CATCHMENTS

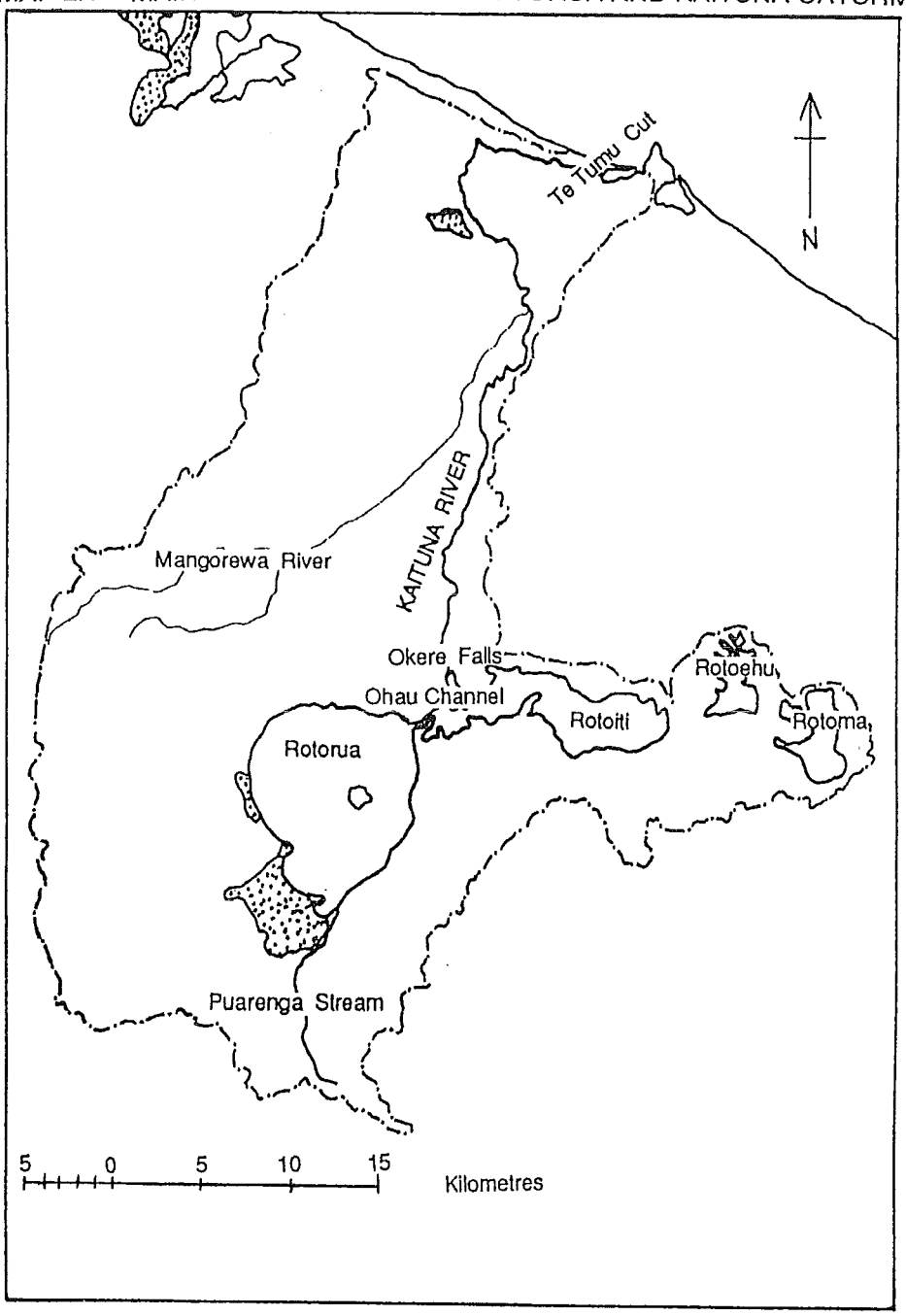


PLATE I

Looking from State Highway 33 to the Ohau Channel. Note the Channel has been substantially straightened and widened by Catchment Control Works.

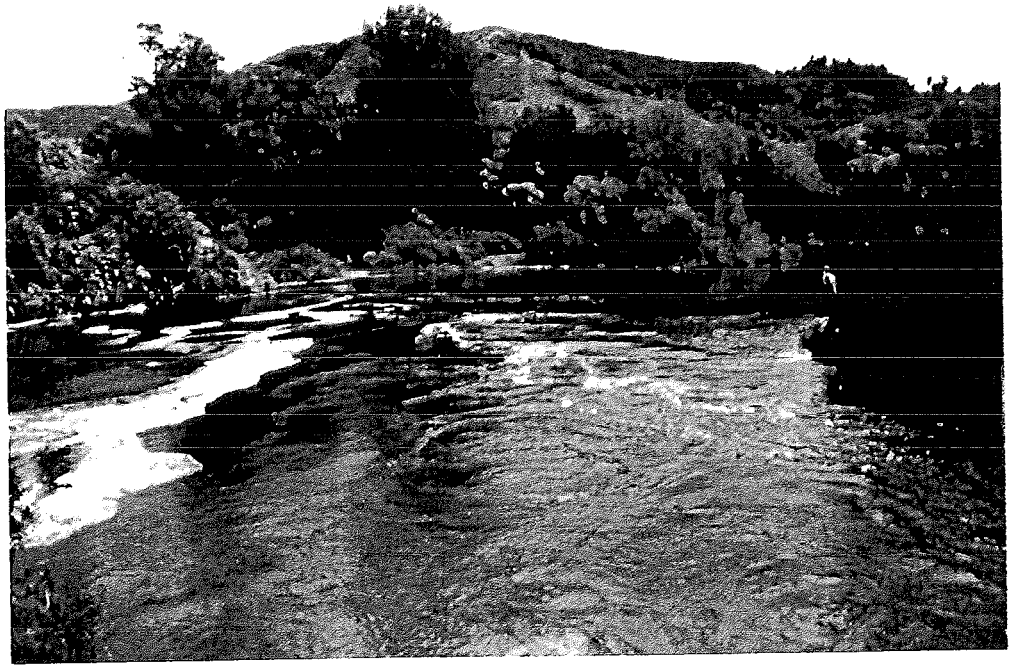


PLATE II

The Trout Pools below Okere Falls. Just down stream from the Pool, the proposed nutrient pipeline was to discharge.

The upper part of the Kaituna River catchment is principally the water collection and storage area. Lakes Rotoma and Rotoehu are minor subcatchments and have no surface outlets although thought to contribute some 1.5 cumecs to Lake Rotoiti by subsurface flow (Pittam, 1968; cited in Nairn, 1975).

From Lake Rotoiti, the Kaituna River flows over the Okere Falls descending 1140 metres in 51.2 kilometres to discharge at the Te Tumu cut near Maketu Estuary (Map 2.1). For its first 25.6 kilometres the Kaituna River flows through a deeply incised gorge of soft ignimbrite rock characteristic of this area (Nairn, 1975). Warping and faulting around the coast produced the Maketu basin, the Kaituna and Wahi swamps forming the lower part as sediment infill occured.

Due to the inland location of Rotorua and the preferred method of disposing effluent into the lake, sewage cannot be readily flushed from the fresh water system without affecting other waterbodies. However changing attitudes and a greater awareness of the dangers which can result from increases in sewage outflows, meant that over the years an increasing level of pretreatment for Rotoru's waste is now required before disposal into the lake. Rotorua City has, by national standards, a high level of pretreatment.

2.2.2 Sewage Treatment in New Zealand

As at 1982 79 percent of New Zealands population lived in communities with reticulated sewage systems. The other 21 percent in rural communities, holiday settlements, and farm use on-site disposal, predominantly on septic tank systems. Wastewater effluent from community sewage systems are discharged to a variety of receiving waters:

- 18 percent into streams (80 percent as treated effluent)
- 2 percent into lakes (95 percent treated)
- 33 percent into harbours and estuaries (98 percent treated)
- 25 percent into the ocean (50 percent treated)

Therefore it can be concluded that less than 1 percent of community wastewaters are discharged through land disposal systems (Gunn, 1982). Gunn argued that the reason for this was not because of any sort of environmental awareness or "a motivation to utilise the nutrient value of wastewaters for beneficial purposes" (p.25), but only because there did not exist any suitable receiving water. These figures relate to those in Table 2.1 where the methods of wastewater treatment and receiving waters for most major cities in New Zealand is shown.

TABLE 2.1

METHOD OF WASTEWATER TREATMENT AND RECEIVING WATERS FOR PRINCIPAL TOWNS OF NEW ZEALAND

Town	Treatment	Receiving Water
Whangarei	Secondary	Whangarei Harbour
North Shore	Secondary and ponds	Stream
Auckland	Secondary and ponds	Manukau Harbour
Hamilton	Primary and disinfection	Waikato River
Taupo	Secondary	Waikato River
Rotorua	Tertiary	Lake Rotorua
Tauranga	Secondary	Tauranga Harbour
Mt Maunganui	Ponds	Sea
Whakatane	Ponds	Sea
New Plymouth	Secondary and disinfection	Sea
Palmerston North	Primary	Manawatu River
Porirua	Nil	Sea
Wellington	Nil	Sea and harbour
Nelson	Ponds	Sea
Blenheim	Ponds	Wairau River
Christchurch	Secondary and ponds	Estuary
Dunedin	Primary and disinfection	Sea
Invercargill	Primary	Estuary

Adapted from Roberts (1984, p.14)

The three main types of treatment being primary, secondary and tertiary, with each level representing a greater degree of purification.

In 1984 at the time of the Waitangi Tribunal hearing the most frequently used water for receiving effluent was coastal in origin and treatment was usually minimal. In comparison, inland areas such as Rotorua had a much higher degree of pretreatment before disposal. Even though the effluent from Rotorua was treated to a much higher level than other centres around New Zealand the problem of decreasing water quality still remained. What is apparent and is legitimised in law is a predisposition to uitilise water as a means for disposal. The reasons for this will be explored in Chapter Four. The next section will discuss the historical context of the Rotorua problem.

2.2.3 The History of Rotorua's Effluent Disposal

Because of the City's lakeside location a potential for sewage disposal problems have developed.

> "Those problems have been resolved several times, and each time in response to the conditions, expectations and technology of the period. changing circumstances and changing knowledge eventually make each solution obsolete and the problem has to be solved in a different way." (Roberts, 1987).

In 1898 the first water borne sewerage system was laid in the town of Rotorua, in the area now encompassing the Central Busines District (C.B.D). The sewage was pumped to a large septic tank situated on the banks of Puarenga Stream. The effluent was further treated in sand filters before being discharged into the stream some 500 metres upstream from its mouth before entering Lake Rotorua (see Map 2.1). In 1901 the Department of Tourist and Health Resorts (D.T.H.R.) assumed control of Rotorua township from the Lands and Survey Department. Municipal control was then established over the central part of town in 1907 by the D.T.H.R while sewage disposal from other locations around Rotorua was administered by the Borough Council. A local Tourist Officer was then placed in control of the town site, subject to the

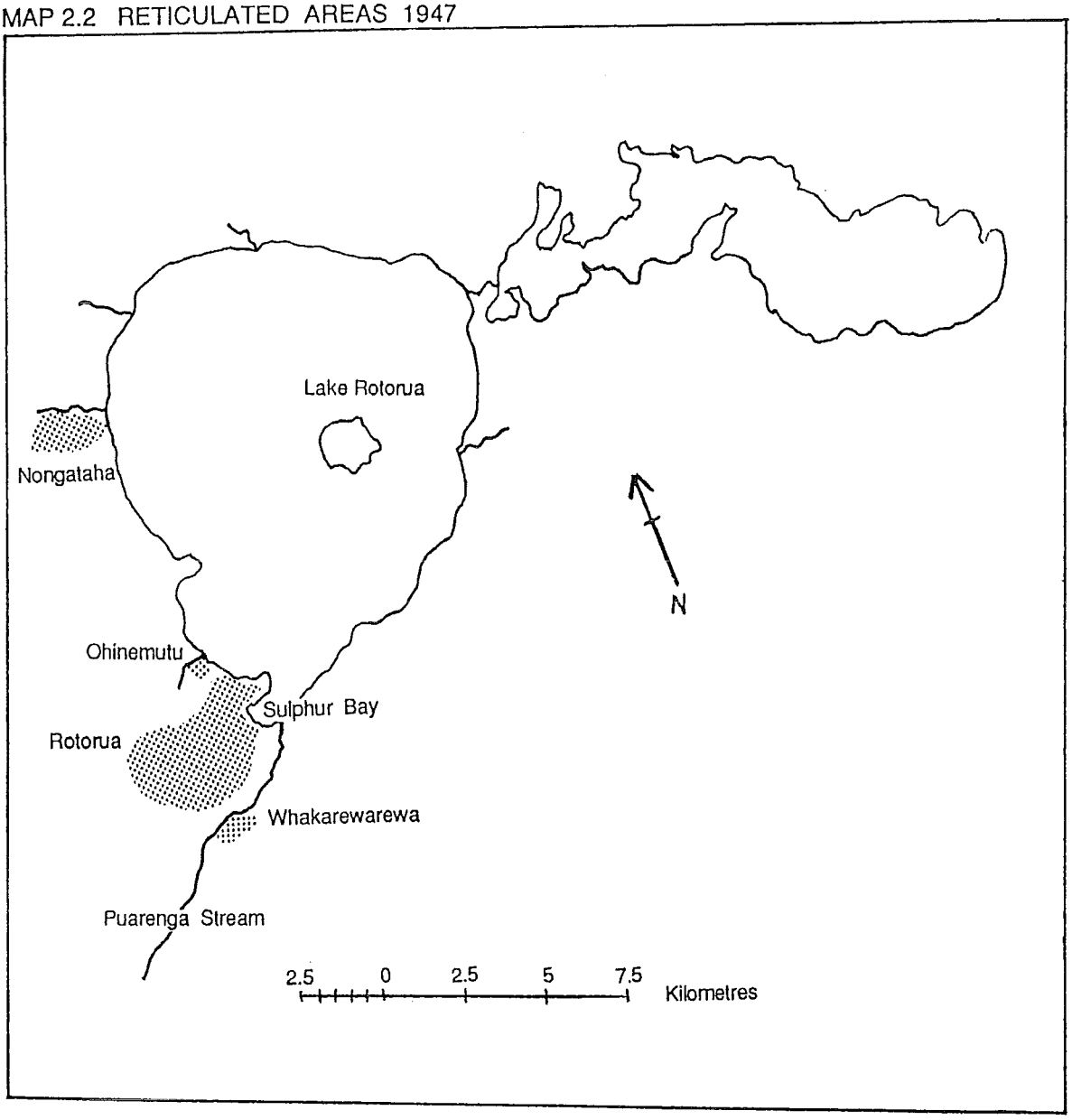
permanent head of the Tourist Department in Wellington (Moran, 1979).

The Borough Council and the D.T.H.R now operated separate effluent disposal facilities with the latter assuming control over the C.B.D. Under the management of the D.T.H.R Rotorua central was developed as the leading tourist and health resort in the country. From 1901 to 1960 Rotorua accounted for an average of half the government expenditure on tourist facilities (Moran, 1979). State involvement in the Rotorua district also included the planting of exotic forests. The Department of Lands and Survey established a forestry branch which endured till the State Forest Service emerged as a separate Government department in 1920. During this period a nursery was established in Whakarewarewa further cementing the forest industry in Rotorua (Abel, 1973).

In 1903 the D.T.H.R stated that it was necessary to develop an adequate drainage system due to the risk of slops fom hotels and boardinghouses percolating to the mineral springs and causing pollution (A.J.H.R. cited in Moran, 1979 p.130). This emphasised the need for a system that could adequately deal with an increasing pollution problem. It was seen even as early as 1903 that if pollution was not controlled, then the potential for revenue from tourism might be lost.

While the Tourist and Health Resorts Department still operated the town system, the Borough Council reticulated the suburbs in 1932. Treatment was provided with municipal septic tanks and the Borough constructed a second effluent pipe alongside the first at Puarenga Stream. An outbreak of cholera led the Borough to reticulate the Maori villages of Ohinemutu and Whakarewarewa in 1935. Ohinemutu sewage was pumped into the town system, while a septic tank was built for Whakarewarewa on the banks of the Puarenga Stream. Drainage, sewage and water services previously administered by the D.T.H.R were transfered to the Borough Council on the 1st of December 1947 (Moran, 1979). This meant that all public service utilities were now under the control of the Borough Council (see Map 2.2).

MAP 2.2 RETICULATED AREAS 1947



The dramatic expansion of farming, forestry and tourism in the district since the Second World War resulted in one of the fastest population growth rates of any urban area in New Zealand (Upper Kaituna Catchment Control Scheme Report, 1975). In 1945 the main urban area population was 10,756 and in 1981 it was 48,314 (Department of Statistics, 1987). Services, apart from the water supply, had not kept pace. The most common form of sewage treatment at this time was by municipal or household septic tank. However, not all areas provided suitable conditions for disposal of effluent on site, especially those where industrial, motel and high density residential development had taken place. In 1961 the population on the existing septic tank system had risen to 8,000 out of the total city population of 25,564 (Department of Statistics, 1986). With these difficulties, and an associated concern for overloading the municipal septic tanks, and two municipal outfalls discharging effluent into Puarenga Stream (which subsequently flows into the lake), the City Council began seriously considering extensions to the existing sewerage system. As a result loans covering major reticulation and treatment for the city's effluent were approved in 1970, along with the construction of a 3 Stage Activation Sludge Treatment Plant (Roberts, 1987).

The first intensive study of the lake was carried out by Dr D.G Fish of the Ministry of Agriculture and Fisheries between 1967 and 1970. Results from the study gave cause for concern, as it appeared that the lake was rapidly deteriorating (Biggs, 1980). The investigation identified the lake as being eutrophic - or being in a nutrient enriched state. Eutrophication may manifest itself in several ways. The clarity of water may be reduced because of the prolific growth of algae. There may also occur surface scums of blue-green algae, which may be toxic. The bottom waters may also lose oxygen during periods of thermal statification. This then results in the release of large amounts of nutrients from the sediments, as well as creating stress conditions for other aquatic life forms. Lake Rotorua exhibited all of the above conditions in varying degrees. However with continued effluent discharge the lake water quality has seriously deteriorated indicating to a large extent the impact of human modification on the lake.

Sewage nitrate and phosphate inputs since the study carried out by Fish have both increased steadily and now make a greater portion of the total nutrient input of the lake (50 percent for phosphate and 27 percent for nitrate in 1984-85) than was the case in 1975-76 (19 percent for phosphate and 13 percent for nitrate) [Daily Post, 3/9/87].

When the Upper Kaituna Catchment Control Scheme was published by the Bay of Plenty Catchment Commission in 1975, among the soil conservation and water control measures to be introduced there was outlined a proposal to transfer the treated effluent away from Lake Rotorua to the Kaituna River by way of a nutrient pipeline thereby removing the principal cause of eutrophication. This report was to dictate the eventual option pursued in disposing of Rotorua's sewage, and which led to the hearing before the Waitangi Tribunal. The outcomes of the Tribunal will be discussed further on. The next section will examine the responses of the various government agencies to the problem of decreasing water quality and eutrophication.

2.3 A GENERAL RESPONSE

It was clear therefore, that a high standard of pretreatment would be required if effluent was to be tipped into Lake Rotorua. However standards of discharge are dependant upon classification of the receiving waters under Section 21 (3) of the Water and Soil Conservation Act 1967. As a legal system, classification of waters was first introduced into New Zealand law by regulations pursuent to the Waters Pollution Act 1963. The regulations recorded that the classification standards then promulgated were based upon the use made of the water classified. The system used for natural water was based on a scale from A to E, with A maintaining highest quality of water, that being for drinking and other personal uses, while E maintained the lowest water quality standard. The regulations of the Waters Pollution Act stated that each class of water was subject to the requirements concerning pollution specified in that particular class. Also required was that persons discharging 'waste' into natural water should obtain a permit to do so (Turner, 1979).

When first stage of the treatment plant was envisaged, the receiving waters had not been classified which therefore meant it was difficult to arrive at acceptable design parameters. Comprehensive control of the use of natural water and over discharges into natural water was established by the Water and Soil Conservation Act 1967. By an Amendment in 1971, classification was intergrated into the system of granting water rights set up under the 1967 Act. The Amendment stated that a classification was:

> "... a declaration of the minimum standards of quality at which the natural water so classified shall be maintained in order to promote in the public interest the conservation and the best use of that water" [S.26 (H)].

In 1965, representatives of the Public Health Section of the Ministry of Works and Development addressed a meeting in Rotorua, when the proposed classification of Lake Rotorua and Puarenga Stream was announced. It was suggested by a Ministry of Works Officer that the Rotorua City Council could well consider piping effluent to the Kaituna River and that the cost of the pipeline could partly be offset by a reduction in the degree of treatment required. The Tauranga County Council objected to that proposal as it was considering using the Kaituna River for potable water supply. Roberts (1984) stated that the Rotorua City Council also failed to take the proposal seriously, and although not stipulated, the Council forsaw some future difficulties with that particular option of waste disposal and proceeded with planning for the 3 Stage treatment plant by the Puarenga Stream.

Classification of Bay of Plenty waters, including the Kaituna River catchment was made on 18 December, 1966 with Lake Rotorua being classified as Class C under the Third Schedule of the Act (Appendix). In 1974 the Water Resources Council decided to re-classify Lake Rotorua as Cx, due to the nutrient enriched state of the lake (the suffix x indicating waters that are sensitive to enrichment). The City Council objected to the re-classification as not all parts of the lake would be representative of the given classification and a hearing took place in February 1975 following which the re-classification was confirmed. The City Council then appealed on the grounds that, even under natural conditions, the lake waters would not meet all

the standards of the C classification expecially in areas influenced by geothermal flows. The appeal was settled in 1977 when the Cx classification was confirmed for most of the lake. A small area of lake frontage was classified as Bx and two areas at Sulphur Bay and Ohinemutu were left unclassified because of the influence of geothermal inflows on lake water quality (Taylor, 1987).

In 1970 the loan proposal for Stage 1 of the Activated Sludge Treatment Plant was approved. The Stage 1 plant was designed for reductions in B.O.D (biochemical oxygen demand which occurs in natural waters as a result of the metabolic processes of microorganisms) and suspended solids such that the classification of the receiving water could be maintained. The plant was commissioned in April 1973 and serviced an average daily effluent flow of 6,350 m^3/d (Roberts, 1984).

However the District Council through its ratepayers, unable to finance the solely cost of the treatment plant. The Council therefore applied to the Loans Board set up under the Local Authorities Loans Board Act 1926 to help subsidise the capital costs. Furthermore under the provisions of the said Act, the Ministry of Works had to approve all technical works requiring government subsidies. This in effect enabled them to control all moneys for subsidies. The reasons for the Ministry of Works being able to control such local authority schemes will be explored more fully in Chapter Three.

In the meantime, the Loans Board instructed the Council to reticulate the whole city, not just parts of it. This meant that Stage 2 of the three stages had to be constructed immediately after Stage 1. In 1971 Rotorua City Council began work on the treatment plant and associated reticulation (Underwood, 1984). In April of that year the Water Pollution Control Council issued to the City Council Permit No. 146/7 to authorise the discharge of treated waste from the treatment plant into Puarenga Stream and thence Lake Rotorua. The permit was limited to the discharge from a population of 20,000 and was subject to conditions relating to the quality of the effluent (Taylor, 1987). This permit to discharge became a Water Right under current

> "... this method would be attractive if only Lake Rotorua was to be considered... Simple diversion would, in our opinion, lead to a strongly increased nutrient input to the river, the biological consequences of which are definitely adverse. This judgement is further stressed by the fact that the urban phosphorus discharge is much higher than formally assumed, and that the biological responses in running waters are more vigorous than in lake waters... Immediate measures are urgent, however. Generally speaking a diversion - without any treatment measures - implies in fact only a transfer of a problem from one place to another. A diversion therefore must be combined with significant phosphorus removal. There are strong reasons for starting this removal without awaiting any possible future diversion, in order to bend down the eutrophication curve of Lake Rotorua." (*Ibid*, 3.1)

The report also outlined the advantages of other methods, and stressed that those were worthy of closer examination. Irrigation of forest areas with pretreated wastewater, and biological removal of nutrients by biotic weeds which may be then harvested, were both suggested.

After consideration of the reports received, the Rotorua City Council proceeded with installation of a chemical stripping plant using alum as the coagulating agent in addition to the existing plant. Phosphorus was stripped in a simultaneous precipitation process and the plant proved to be capable of removing 70 percent of the phosphorus reaching the wastewater treatment plant. The Council applied for loan authority but the Loans Board refused to grant the application, instead stating that alternatives should be considered, principally that of the nutrient pipeline proposal. Council however, considered immediate action necessary and financed the installation of the chemical process plant out of revenue. The plant was commissioned in April 1976 and fully automated that year (Roberts, 1987).

In 1974, Rotorua City Council filed an application (No. 60) for a right to replace permit No. 146/71 and to cover the discharge from Stages 1 and 2 of the treatment plant. After the final re-classification of Lake Rotorua (1977) the City Council had by this time reached the point where Stage 3 of the treatment had been designed. The Council therefore withdrew Application No. 60 and lodged a fresh application (No. 444) to cover the discharge into the

lake from all three stages. Public notification was in August 1978.

Objections were lodged by a number of agencies including the Water Resources Council, the Royal Forest and Bird Protection Society and the Lake Rotorua Guardians. The objections were concerned with the continued deterioration of water quality in Lake Rotorua and the effect the increased rates of discharge would have on the lake. A Special Tribunal was established to hear the application in 1979. Adopted by the Regional Water Board after the Tribunal's recommendations, was that the right be granted, subject to conditions. The right required the removal of 70 percent of the phosphorus from the effluent before discharge. This particular condition was imposed due to the success of the alum chemical stripping process which had been achieving removal rates in excess of over 80 percent.

However, with the other stages of the treatment plant being brought inflow and a greater volume of effluent being handled, the rate of phosphorus removal fell, and over the next few years, was achieving the rate of only 35 percent to 40 percent. Reticulation of the city area continued over this period resulting in increased effluent flows and this, together with less efficient phosphorus removal, meant that up to 30 tonnes of phosphorus was being discharged from the treatment plant into Lake Rotorua each year. (Taylor, 1987)

Two separate agencies have each pursued different options in order to find a solution for effluent waste disposal. From the outset when a Ministry of Works official first suggested in 1965 pumping the wastewater into the Kaituna River the Council of the time objected and proceeded with investigating alternative methods of disposal. The 1975 Upper Kaituna Catchment Control Scheme included several options regarding wastewater disposal, among them the nutrient pipeline. Of the various alternatives for the control of nutrient discharge to Lake Rotorua, the Water and Soil Conservation Authority (NWASCA) identified the nutrient pipeline as the most technically and economically appropriate option. The nutrient pipeline was therefore included as part of the Scheme approved by Government which was to be implemented as a whole and not in a piecemeal fashion. The Kaituna Catchment Control

Scheme was approved by Government in its entirety after the Upper and Lower Schemes were combined to provide an overall catchment management plan. Such approval being notified to the Bay of Plenty Catchment Commission in July 1979. A deed was subsequently executed by the Crown and the Bay of Plenty Catchment Commission, setting out the basis of agreement for financing and implementing the scheme. The Rotorua District Council now had clear defined guidelines as to the option/ options open to them for sewage disposal however limited.

In August 1981, the Rotorua District Council prepared an Environmental Assessment Report (EAR) of the proposed nutrient pipeline outlined in the Kaituna Catchment Control Scheme Report. The EAR considered alternatives to the nutrient pipeline including that of biological stripping coupled with chemical stripping, the use of aquatic weed beds for stripping nutrients, and land disposal. The report found that there was insufficient information available regarding any of the aforementioned options and long term effects would have to be reliably established before any of the other options other than the pipeline could be implemented. One of the conclusions reached by the report was:

> "The proposed nutrient pipeline appears to offer the only hope of early and complete interception of all nutrients discharging into Lake Rotorua from the Wastewater Treatment Plant. This was the basic conclusion reached in the Upper Kaituna Catchment Control Scheme - 1975 Report and it still appears to be the situation of the moment" (2.11).

By 1982 the District Council had decided that further expansion of the treatment plant would be needed within a few years and there were also continuing problems arising from the inability of the plant to meet the water right conditions with respect to phosphorus removal. An application for a new water right to discharge into the lake was therefore lodged (933) and, at the same time, an application was lodged for a right to discharge into the Kaituna River by way of a nutrient pipeline (904/1-3) thereby fulfilling the terms as set out in the Scheme Report. There were six objections lodged against the appplication to discharge into the lake and twenty eight against the application with respect to the pipeline. The objectors fell squarely into two 'camps' with one group concerned about the continued discharge of effluent into Lake Rotorua

and the other group, predominantly made up of Maoris from Ngati Pikiao and Te Arawa, being concerned with protection of the Kaituna River. For the Maori, the objection lay with the proposal to transfer the treated sewage from Lake Rotorua via the nutrient pipeline, into the Kaituna River. It was argued that this proposal was not only contrary to the principles of the Treaty of Waitangi but also in direct contravention to the spiritual, cultural and traditional values held by those of Ngati Pikiao and Te Arawa. For the Maori of this area the Kaituna River was considered to be spiritually and culturally sacred.

As a result the Regional Water Board established a Special Tribunal in November 1982 to consider the application made by the Rotorua District Council for Water Right Nos. 933.904/1-3, and 934 and to hear the objections. Application No. 933 was for a right to continue discharging into the Puarenga Stream and thence into Lake Rotorua. Applications Nos. 904/1-3 were associated with the nutrient pipeline, while No. 934 was for a right to discharge effluent from experimental panels containing aquatic macrophytes.

It was the application for Water Right No. 904/1-3 that invoked a strong Maori objection especially from Te Arawa Trust Board. However in considering the application, the Special Tribunal:

> "...noted the concern of the Maori people and the cultural and environmental values placed upon the Kaituna River and Maketu Estuary, and hold that their concerns are important in respect of assessing the impact of the proposed discharge... Given the transformation of the effluent to a product similar to natural materials likely to gain entry to the Kaituna River, the Tribunal cannot sustain the claim made by the Te Arawa Maori Trust Board, that the discharge of treated sewage effluent to the river would be a complete disregard and desecration of the historical and environmental values which are of such significance to the Maori people, who regard the river as sacred. The Tribunal is however of the view that the concerns of the Maori people warrant a requirement that the effluent quality be to a standard consistent with a high level of performance such as can be achieved by a modern Activated Sludge Plant. Hence, the effluent standard recommended is 25g/m^3 biochemical oxygen demand (BOD) and 25 g/m^3 suspended humus solids, levels which represent a higher standard than the previous conditions set for discharge to Lake Rotorua"
>
> (Special Tribunal Report, 1982).

The rights were issued in March 1984.

Although the claim by Ngati Pikiao had been lodged before the Waitangi Tribunal in 1978, as a requirement under the Treaty of Waitangi Act 1975, if a claim could be settled through other means then that option should be pursued. In effect Ngati Pikiao waited for the outcome of the water right hearings pertaining to the nutrient pipeline and associated discharges. The Special Tribunal convened by the Regional Water Board was the last oppotunity Ngati Pikiao had at objecting to the nutrient pipeline. Their grievances still remained unresolved and hence the only course of action left open was to pursue the claim before the Waitangi Tribunal.

This still begs the question of determining what the claim was against the Crown, and why it was delayed for six years from its filing in 1978, to the hearing in 1984. The ensuing section will explain firstly the Ngati Pikiao claim and the reasons for its delay. Following from this, the hearing at Te Takinga Marae will be discussed, outlining the issues and the responses of those agencies involved. Finally the section concludes with a discussion of the potions explored by the Waitangi Tribunal.

2.4 THE KAITUNA RIVER CLAIM WAITANGI TRIBUNAL

In 1978 a claim was lodged by Ngati Pikiao in response to the proposed implementation of a nutrient pipeline to the Kaituna River. In its terms of reference, the Waitangi Tribunal was unable to consider any claims which could be resolved in other arenas or courts of law. Moreover if a claim could be settled outside the Tribunal, then that course of action was to be followed. As a result Ngati Pikiao continued through with the procedures established under the 1967 Water and Soil Conservation Act whereby persons may object if they be prejudiced by a water right application culminating in the Special Tribunal, 1982. Its reported findings (as previously discussed), presented in March 1984, were unable to consider Maori spiritual and cultural values hence Ngati Pikiao had no recourse but the Waitangi Tribunal.

Ngati Pikiao were claiming that the proposal to divert treated effluent from Lake Rotorua to the Kaituna River was in direct contravention of their traditional values as protected by the Treaty of Waitangi. The proposal to divert sewage into the river would seriously affect the

ability of Ngati Pikiao to utilize those resources available in the river.

2.4.1 The Issues

The claim was heard at Te Takinga Marae, Mourea (see Map 2.2) during the week commencing 23 July 1984 and during the week commencing 8 October 1984. The first session involved the claimants putting their case forward and settling the issues while the second was for the purpose of hearing other interested persons or groups and final submissions. After hearing the claimants, the Waitangi Tribunal identified issues they thought ought to be explored. Counsel for the other parties, including government agencies, conferred and submitted the issues they agreed upon and offered argument with respect to those they did not. The issues which the Waitangi Tribunal offered for settlement related to the following:

1. Is the pipeline proposal the result of a action, policy or practice by or on behalf of the Crown, if so, what is that action, policy or practise?
2. Will the proposed Kaituna River discharge prejudicially affect the claiments or it it likely to prejudicially affect in all or any of the following ways:
   (a) By contravening their spiritual and cultural values?
   (b) By reducing the quality or quantity of their fisheries in the Kaituna River, the Maketu Estuary or the sea adjacent thereto?
   (c) By rendering the catch of these fisheries unacceptable on spiritual or cultural grounds?
   (d) By rendering plant and other resources in and about the river less suitable for traditional purposes?

3. Is the pipeline proposal inconsistent with principle of the Treaty of Waitangi?
   (a) In 1840 was the Kaituna River owned and had it been owned for many generations by the Ngati Pikiao and Te Arawa?
   (b) Did these traditional rights of ownership carry with them the free and uninterrupted right to fish the river, the estuary and the sea, together with the use and enjoyment of the flora adjacent to it?
   (c) Have their traditional rights continued uninterrupted to this day?

(d) Is the discharge into the Kaituna River, of sewage effluent, no matter how scientifically pure, contrary to Maori spiritual and cultural values?

(e) Does the Treaty of Waitangi guarantee the continued enjoyment and undisturbed possession of the toanga Maori?

4. Having regard to the scheme as a whole, are there any practicable alternatives to the Kaituna pipeline (in this context practicable alternatives have to be considered in the light of Maori values and sound engineering practice)?

5. In terms of S.6(1)(a) of the Treaty of Waitangi Act 1975 is the Water and Soil Conservation Act 1967 an Act for the time being in force which predjucially effects the claiments in that it fails to make provision for, and hence implement and recognise the provisions of the Treaty of Waitangi?

Having decided upon the issues, it was then up to the government agencies involved to put up an argument to those which they disagreed with. As a result of the final submissions and those preceeding, the Waitangi Tribunal then issued its findings. The Tribunal found that the Ministry of Works was the principal agency responsible for promoting the nutrient pipeline proposal on behalf of the Crown thus acting against the provisions laid out in the Treaty of Waitangi Act. Of the five main issues outlined the Tribunal found in favour of the claiments and made the following recommendations:

(1) That notice be taken of the findings of this Tribunal. That the policy of the Crown by which a pipeline is to be constructed to discharge effluent from the Rotorua District Council Wastewater Treatment Plant into the Kaituna is contrary to the principles of the Treaty of Waitangi.

(2) That research be undertaken into the possibility of disposing of such effluent by discharging the same on to land in a suitable and practical manner instead of discharging the same into Lake Rotorua.

(3) That the Water and Soil Conservation Act 1967 and related legislation be amended to enable Regional Water Boards and the Planning Tribunal to properly take into account Maori spiritual and cultural values when considering applications for grant of water

rights, the renewal thereof or objections to such applications.

(4) That the subsidy granted for the Kaituna Catchment Control Scheme be altered to enable the Rotorua District Council to treat the effluent from its Wastewater Treatment Plant by a suitable biological or chemical stripping process without loss of that subsidy so that phosphorus and nitrogen can be removed from that effluent up to the standard required by the water right now granted permitting the District Council to discharge such effluent into Lake Rotorua.

The recommendations of the Waitangi Tribunal could not be given any legal status under the 1975 Act and so had to pass on to central government for approval. The following section will outline the role of the Ministry of Works in the nutrient pipeline proposal as the Tribunal identified the department as having a principal role in the matter.

2.4.2 The Ministry of Works

During the hearing, the Ministry of Works and Development, as the Crowns agent, conceded that the pipeline was indeed part of a policy by or on behalf of the Crown. The Ministry's role, it was argued, was to provide technical advice and assistance to both Central and Local Government as part of its statutory responsibilities in administering both the Soil Conservation and Rivers Control Act 1941 and the Water and Soil Conservation Act 1967 (Watson, 1984). As enunciated in the earlier Te Atiawa Report "the Ministry acts as technical advisor to the Local Authorities Loans Board and the Department of Health, reporting on the capabilities of the works to meet the conditions of the water right and whether the selected works are the best and most economic option for any particular situation. It has no fixed policy as to sewage disposal systems applicable to any situation and considers that each case must be considered on its own. It checks however to ensure that the alternatives have been considered... The Ministry seeks an appreciation of local support or opposition but it has no direct responsibility to ensure that the concerns and attitudes of the general public are considered" (Wai. 6, para. 5.3 p.20).

Furthermore the Atiawa report stated that "... the Ministry of Works and Development is not in a position to seek or insist that public health works be created or designed to accord Maori cultural preferences in disposal of waste in proximity to Maori fishing grounds" (p.20). The Ministry of Works and Development, in its position as technical advisor to both central and local governments, was able to persuade the Crown that by adoption of the nutrient pipeline proposal the problem of eutrophication would be solved in the most economic and technically efficent manner possible:

> "The enrichment or the eutrophication of Lake Rotorua has been a specific problem over many years... The mitigation of the enrichment of the lake is therefore a central issue in the Catchment Scheme proposal...the proposed nutrient pipeline appears to offer the only hope of early and complete interception of all nutrients discharging into Lake Rotorua from the Wastewater Treatment Plant." (Cowie, 1984)

The Waitangi Tribunal in its findings commented that "the Ministry of Works... seems to have fixed its attention on Lake Rotorua to the exclusion of the river and the estuary and has, right from the very outset seen only one solution - the pipeline - on which it has persistently insisted" (Wai. 4, para. 7.8), whereas the Catchment Commission and Rotorua District Council have looked at the sewage disposal matter quite differently. Both agencies have explored in depth, alternatives to the nutrient pipeline as evidenced in the Catchment Scheme Report and reports from private consultants hired by the District Council.

> "Both bodies have made it clear that they have been drawn along the pipeline path by departmental insistence that unless they accept the pipeline idea they would not be able to get the heavy Government subsidy. That subsidy is important to them both because without it their ratepayers would never be able to afford to finance the Kaituna Catchment Control Scheme. The Ministry has controlled the subsidy. The subsidy has controlled the scheme" (Wai. 4, para. 7.10).

2.4.3. The Alternatives

The Waitangi Tribunal was of the opinion that quite apart from the affront to Maori spiritual and cultural values, common sense dictated that every reasonable step be taken to protect the whole water system, not just Lake Rotorua. This led to the Tribunal asking the question of what alternatives therefore existed if the pipeline was abandoned.

Murray North and Partners in its reports (1972 and 1973) to the Rotorua District Council had considered biological stripping which clarified nitrogen from the wastewater, as one option, commonly known as the Bardenpho Process. Bardenpho is the description given to an enhanced nitrogen and phosphorus removal process and was originally developed in South Africa. There are now 40 plants in commission around the world. The Tribunal sought to investigate this alternative further. However Murray North and Partners "were unable to positively conclude that a biological stripping process could readily be successfully introduced at the Rotorua Plant" (Underwood, 1984). In his submission to the Waitangi Tribunal, Underwood stated that:

> "...only three or four plants had stripped phosphorus to the high degree needed to meet the Water Right (444) for discharge into Lake Rotorua, but more recently a process had been developed which indicated that more plants had been able to achieve the required performance" (Wai 4, 7.15).

Underwood went on to talk cautiously of advances in effluent disposal technology which were likely to continue.

The Waitangi Tribunal concluded that given technological advances in wastewater disposal, alternatives to the nutrient pipeline proposal existed. It was clear that both nitrogen and phosphorus needed to be stripped from the effluent before discharge, and that a biological nutrient stripping process was available to achieve that process in a more cost effective manner than the proposed pipeline.

Although the biological stripping process could effectively reduce the quantity of phosphorus and nitrogen in the wastewater it did not solve the problem of where to discharge the sewage. It was the siting of outfall just downstream from Okere Falls which provoked the claim by Ngati Pikiao in the first instance.

Discharge from the Wastewater Treatment Plant is from a point source. It is the result of a process carried out by humans and can be directed where s/he wills (Watson, 1984). The

proposal was for that discharge to be directed into the Kaituna River. However, among the alternatives to the pipeline proposal was an option for land disposal.

Mr. Roberts, Chief Engineer for the Rotorua District Council, outlined the three main types of land disposal to the Tribunal.

> Slow Rate - which is an irrigation system that allows effluent to soak into the ground...
>
> Overland Flow - which allows effluent to flow over land, which has been graded or terraced and
>
> Rapid Infiltration - which allows effluent to soak into the ground from a number of specially constructed basins at various points (Wai. 4, para. 8.4)

It was put before the Tribunal that the best way of dealing with Rotorua's effluent was to combine biological nutrient stripping and then dispose of the effluent by the rapid infiltration process. The Tribunal could not, however, recommend land disposal as a course to be adopted as it did not have information required to make such a finding. The Tribunal concluded that much more could be done to explore firstly the possibility of discharging effluent onto the land rather than into the Kaituna River, and that research should be undertaken to determine whether the biological stripping process was a viable solution to the eutrophication of Lake Rotorua. However the problem did not end with the publishing of the findings. The next section will outline the response of Government to the report and the subsequent measures taken.

2.5 OPTIONS PURSUED AFTER THE WAITANGI TRIBUNAL

When the Waitangi Tribunal was created by the Treaty of Waitangi Act 1975 its function as laid down in 5.5 (1) of that Act was to make recommendations to Government after its investigations. The Tribunal did not have the power to make law, only recommend changes. As a consequence an Interdepartmental Committee was established on December 18, 1984, under the direction of the Cabinet Development and Marketing Committee to investigate the findings of the Waitangi Tribunal on the Kaituna River Claim.

The Committee's terms of reference were threefold. It was to examine the long term effects on Lakes Rotorua and Rotoiti from continued effluent discharge into Lake Rotorua; examine the practicability of land disposal for the effluent from Rotorua City; and recommend the action that should be taken regarding implementation of the Tribunal's findings.

The Committee found, on the information available to it, that diversion of treated effluent by a pipeline to the Kaituna River was the most cost-effective and technologically efficient method of removing nutrients from Lake Rotorua. However, as this proposal was found by the Tribunal to the contrary to the principles of the Treaty of Waitangi, so an investigation into alternatives was necessary.

According to the information presented to the Committee, the biological stripping process outlined in the Kaituna River claim hearing would not meet with the requirements of the water right issued to the Rotorua District Council, quite apart from the extensive modifications required to the Plant. Chemical coagulation using alum, although well established and proven, was uneconomical in its running costs. It was also noted by the Committee that none of the above systems had the ability or potential to completely remove sewage from entering the lake as the pipline would have.

Earlier evidence before the Waitangi Tribunal, ruled out the option of land disposal within the lake catchment as impractical. However, the possibility of other available areas outside the catchment had not been raised before the Tribunal. The Committee thus found:

> "...that a system of land disposal, preferably using a rapid infiltration process comprising several basins within a general area, has the potential to provide a practical solution to the problems relating to sewage effluent from Rotorua City" (Interdepartmental Committee Report, 1985 p.5).

However the Committee could not make any final recommendation to proceed with a land disposal system in the absence of a more comprehensive investigation. It therefore suggested a

Steering Committee be established with the Ministry of Works and Development overseeing project management and design.

Under the Steering Committee three possible sites were investigated with both rapid infiltration and spray irrigation being the two preferred options. The option of spray irrigation to the Whakarewarewa State Forest was eventually decided upon as capital costs were low and work could commence quickly. (Daily Post 4/9/87)

However due to the time involved before the spray irrigation into Whakarewarewa State Forest could begin, the Rotorua District Council decided to extend the treatment plant using the Bardenpho Biological Stripping Process. This would remove both phosphorus and nitrogen to low levels, without the high cost of chemical addition. The Council applied for a variation to its right to cover the period of construction which after appeal was granted in part.

A solution to Rotorua's effluent disposal problem has finally been found. Subsidy rates regarding spray irrigation to Whakarewarewa State Forest were finalised by Government earlier this year and the plant is expected to be operating in early 1990. The Maori preference for land disposal will have been satisfied and the nutrient load on Lake Rotorua from sewage effluent will be practically eliminated.

2.6 CONCLUDING REMARKS

Rather than the conventional methods of effluent disposal through the use of natural waterways, Rotorua has adopted a system of spray irrigation and land disposal. This solution was achieved by weighing up the standard factors of economic cost and technology with that of Maori spiritual and cultural values. It bacame apparent during the Waitangi Tribunal hearing that Maori traditional values were not inimical to development and could in fact enhance water quality standards by using a land based disposal method rather than discharging sewage into water.

The Ministry of Works and Development proposed the nutrient pipeline as a means of retarding the eutrophication of Lake Rotorua. The proposal was seen to be the most cost effective and technologically approporiate system for dealing with Rotorua's sewage problems. It not only solved the issue of where to discharge the effluent, but the pipeline also removed large quantities of derived nitrogen and phosphorus from the lake. What was not given due weight was the physical effect effluent would have on the Kaituna River and Maketu Estuary. More importantly, and what gave rise to the claim to the Waitangi Tribunal, was the effect the effluent would have on Maori spiritual and cultural values, and their resources which were guaranteed to them under the Treaty of Waitangi.

The present Water and Soil legislation allows natural waterways to be used for the disposal of treated effluent, subject to water right applications. What is not given cognisance in the package of water and soil legislation is Maori traditional rights. Until the claim before the Waitangi Tribunal by Ngati Pikiao, Maori traditional values regarding water resource use in the Rotorua region were not recognised. The 1981 Environmental Assessment Report by the Rotorua District Council made no mention of the tangata whenua or their associated values regarding the Kaituna River, Maketu Estuary and surrounding lands. The Special Tribunal formed to hear Water Right Application No. 904/1-3, although giving some recognition to Maori values was not empowered under the associated Act to give Ngati Pikiao any form of legal cognisance.

In understanding why the sewage disposal problem of Rotorua City reached the Waitangi Tribunal, an awareness of a cultural dominance over water resource use begins to emerge. One Government agency under the present water and soil legislation has been able to impose its ideology regarding water resource use in New Zealand. This ideology found form in the Kaituna River Claim where the Tribunal said of the nutrient pipeline:

> "We think this proposal was a mechanical answer to a problem that is open to other solutions ...With hindsight it seems to us to have been the response coming from the mind of a engineer" (Wai. 4, para. 2.5).

CHAPTER THREE

A DOMINANT CULTURAL PERSPECTIVE: THE ENGINEERING SOLUTION

3.1 INTRODUCTION

> "Progress is attainable by knowing and manipulating natural laws and working within the framework of economic laws, *ergo* those who know most about these laws, the objective scientific 'experts', are those in whom trust should be placed when it comes to decision-making about the environment. Because of their relative ignorance the general public are disqualified from participation in this process at any level but the most general." (from Pepper, 1984 p.37 in describing participation in a scientific, technocentric world)

The objective of this chapter is to outline firstly the dominant cultural perspective of water resource use and management in New Zealand, and secondly to show how that perspective has found expression in the legislation. From this, the institutional structures set in place by that legislation can be examined to show how the dominant cultural perspective of water resource use has been maintained. In doing so the claim before the Waitangi Tribunal regarding the nutrient pipeline proposal to the Kaituna River serves to highlight a much broader conflict - that of how Maori traditional values have been excluded, until recently, by a European dominated legislative system.

The Kaituna River claim report by the Waitangi Tribunal found that the departmental insistence of the Ministry of Works and Development in pursuing the nutrient pipeline proposal hindered what was in the end a sensible solution regarding wastewater management (Wai.4, para 7.8). The next section will briefly outline the historical roots of an engineering perspective which came to dominate firstly the Public Works Department (PWD) and then later the Ministry of Works and Development (MOWD).

3.2 ROOTS OF A TECHNOLOGICAL PERSPECTIVE

In order to provide some background on what can be termed an 'engineering perspective' it is necessary to understand the arguments from which this ideology stems. White (1967) argues that early technological development was paralleled with the development of explotitative attitudes to nature which seemed to be 'in harmony with larger intellectual patterns', namely the victory of Christianity over paganism. White contended that allied with technological and scientific developments, orthodox Christianity produced an ideology that allowed exploitation of the environment to occur. Furthermore this 'attitude' was at the expense of those cultures that adhered to paganistic beliefs:

> "This destroyed the animistic beliefs whereby men thought twice before they plundered and destroyed natural objects. It substituted instead a faith in perpetual progress, a belief that God designed nature for man's benefit and rule, and that action, not contemplation, was the correct Christian behaviour. Science formed an extension of theology (for to know God you had to find out how his creation worked), and technology provided the active means to carry out God's will" (Pepper, 1984 p.45)

The focus of White's thesis is the Book of Genesis with its commands to man to multiply himself and spread over the earth and take dominion over it. This perception has major implications for the way the Western mind perceives the environment. More importantly it establishes the hierarchy of God, humankind and the environment, and authorises humans to be responsible for nature (Gray *et al*, 1988).

Whether that responsibility is to be exercised in an exploitative manner or a manner reflecting ideas of stewardship is debatable. Nevertheless, this argument is less important than the undeniable belief in the duality of humankind and nature as separate entities. It is this detachment of people from the natural world, and therefore the ability to perceive the environment as a resource, thus able to be utilised and exploited, which is a distinctive feature of traditional western culture (Thomas, 1984; Gray *et al*, 1988).

From this ideological base therefore, Gray *et al* (1988) argue that there are four identifiable themes which have shaped the way in which the New Zealand Pakeha culture perceived and

hence utilised natural resources - being through science, economics, property rights and the legal system. These themes are examined below.

Science

The concept of modern western science developed from Descartes' philosophy that humans and nature could be distinguished between thinking and non-thinking beings. This process defined humankind as rational, thinking beings - "the subject who observed the object and could impart, in his mind, secondary qualities to nature" (Pepper, 1984, p.51). This led to a separation between man and nature.

> "Nature can operate and change independently and objectively - that is, separately from intentions of human beings. Classical science holds that nature is a machine, behaving in a predictable way according to laws which determine it" (*Ibid* p.118).

The Cartesian philosophy was further extended by Francis Bacon who asserted the creed that "scientific knowledge equals power over nature" (*Ibid* p.54). This was achieved through what can be termed the scientific method, which builds on a secure base of facts and advances them towards greater truth. This application of method, known as reductionism, is concerned with the breaking down of complex things into simple constitutents. Reductionism maintains that a system or phenomenon can be understood in terms of a knowledge of isolated parts, rather than of how the parts relate to form a whole as opposed to a holistic approach. In the search for truth, scientific method, for the western culture, replaced explanations which previously were based on mythology or religious belief. The role of religion became increasingly usurped as the division between science and religion became more pronounced. This led to what O'Riordan (1976) describes as a 'technocratic ' approach to the environment. The outcome of science and the scientific method was to provide humans with a rationale so that they might modify and adjust the environment to suit their needs. This rationale found expression in economics.

Economics

The separation of humans and the environment in western thought is accentuated by the development of the 'free market' economic system. Adam Smith in "An Enquiry into the Nature and Causes of the Wealth of Nations" (cited in Gray *et al*, 1988) profoundly influenced western attitudes to resource development when he proposed that private markets should be "liberated from the tyranny of Government control." Smith argued that private markets promoted the interests of society more effectively than governments whose interventions more often than not led to market distortions. This has a direct relationship with O'Riordan's technocratic approach which can be defined as:

> "An apparent undiluted rational, scientific approach, which particularly translates itself into an economic rationality... There is, too, a belief in the ability and efficiency of management in solving problems by the use of 'objective analysis' and recourse to the laws of physical science - the natural authority of which is extended to economic 'laws'" (Pepper, 1984, p.29).

The market place therefore, became the mechanism by which essential goods derived from natural resources were made available to people. The market functions through the process of supply and demand of goods and services. Demand is the aggregate of individual consumer preferences. Stimulation of the market is dependent upon profit which is that gain a producer makes over and above costs incurred in producing a good or a service. As profit is the driving force of the market, competition occurs via cost cutting amongst suppliers which in turn promotes technological advancements through innovation. Thus the economic system provides a fertile ground for the development of scientific thought and technology.

Within the 'free market' approach natural resources may be regarded as sources of economic wealth primarily to be managed for the benefit of profit making organisations. This 'valuation' of natural resources occured through the introduction of a European property right system which deals specifically with individual property rights and then enforces them in law. Therefore in order that a market economy operates efficiently there must be some form of property rights which allows a redistribution of wealth.

Property Rights

Settlers arriving in New Zealand brought with them well developed attitudes to property and property rights which gave priority to individual ownership. This developed from, as Arnold (1987) argued, a widespread reorganisation and innovation of agricultural practice. this led to an increased output, and successfully fed an expanding population. However, in human terms, the 'modernisation' of agriculture in Europe meant the destruction of many customary communal rights to make way for a more responsive, business-like approach (p.28). European property rights became firmly established in New Zealand law when firstly the Treaty of Waitangi was signed in 1840 and secondly when the English Laws Act 1858 (amended in 1908), provided that:

> "The laws of England as existing on 14 January 1840, so far as applicable to the circumstances of New Zealand,... shall be deemed to continue to be therein applied in the administration of justice accordingly..." (Hughes, 1988)

Property rights create, maintain, and codify relations between people. The customary communal property rights which the Maori had developed was abolished under the Native Lands Act 1862 and 1865 and a system of confering individual title to property was established. This left the balance of power firmly with the immigrant European population. Thus by replacing communal property rights such as those exercised by the Maori, with a system of land tenure under individual title, the settlers gained control and dominance of the land and hence rights to use, or exclude others from using natural resources.

Legal System

Laws are rules which govern relations between people, and between people and natural resources. The effect of the early land laws were to preserve the status and power of the landholders (Gray *et al*, 1988; Williams, n.d; Pawson, 1987). In developing a legal system that is closely aligned to that of England, the values and perceptions of the immigrating culture were maintained and given precedence over all others.

The legislation thus undertooktook to create an institutional bias for the rapid appropriation and exploitation of resources, a process equated with economic growth, individual advancement and 'community' betterment.. The goals and aspirations of private individuals were translated into public policies. These generally provided for ease of access to and the unrestrained use of the public resources of land, water, forest and minerals although tempered with sanctions against 'monopolies'. The major purpose of the legislation at that stage was to authorise and ensure ease of access to and use of land and water for private gain, and to that end create the necessary rights, licences and privileges (Hearn, 1982).

The values of science, economics, property rights and law enabled the immigrant settlers to develop and exploit the natural resource base of New Zealand. These elements quickly found expression in the engineering profession. Science enabled the settler to develop the technology and tools required for resource utilisation, while the introduced system of economics provided the motivation to develop and expand production of natural resources. The implementation of individual property rights meant that resources could become privatised and allocation was based on wealth and power. Finally the legal system provided the rules by which natural resources were able to be distributed hence ensuring the continuation of one set of values in resource use. Through the four evolutionary themes of resource development in New Zealand, a dominant European perspective emerged. In water resource use and management it has found expression through the engineering perspective.

The following section will explore how the engineering profession through the PWD and later the MOWD came to dominate water resource use and management in New Zealand. By doing so this will provide an indication as to how one culture's values and perspectives came to dominate New Zealand's environmental legislation.

3.3 RISE OF THE ENGINEER

The engineering profession firstly through the Public Works Department and later the Ministry of Works and Development maintained a monopoly of control both in management

and in the process of decision making in developing New Zealands' water and soil resources. This section will outline how the engineering profession became ensconced in water resource management and the subsequent effect this had on water and soil legislation.

In 1870 the first major development programme for national growth was introduced under the Immigration and Public Works Act 1870. Julius Vogel, the Colonial Treasurer, in instigating the Bill realised that the established provincial system of government tended to develop only those areas surrounding the provinces without due regard to the interests of the nation as a whole. Vogel thus proposed development of a national infrastructure which would knit the country together. This infrastructure was to be developed under the umbrella of a Public Works Department. First among the proposed national works was to be system of railways, and second a network of roads which would serve the railways and connect them with the lands passed through; or where no railway was proposed, would serve as the primary arteries (Furkert, 1953). The public works proposal by Vogel was also seen as the solution to Maori/Pakeha problems in the North Island. With the interior opened up, survellience of the Maori would be made easier and increasing numbers of settlers would then counterbalance the native population (Noonan, 1975).

In twenty years after the implementation of the Public Works Act, a unified communication system developed which did much to turn New Zealand from a competing Provincial system to a nation with a unified economic base. Furthermore the Public Works Department did not involve itself solely in the construction of transport networks. It also purchased Maori lands, developed water races and irrigation schemes, constructed public buildings and was involved in lighthouse construction, repair and maintenance (Noonan, 1975). An engineer summarised the profession's role as follows:

> "It is not always realised that the work of the engineer in the first half century of European settlement in New Zealand was the major contributing factor to the expansion of the country's economy and to the comfort of the people. Without the engineer there would have been little progress, and by 1900 transport would still have been by Maori canoes, packhorses and perhaps staging coaches over the plains of the

South Island and along the beaches of the North Island.
(Hanson, 1956 Presidential Address New Zealand Institute of Engineers.)

From the outset the engineering profession gained control of the institutional structures of the Public Works Department. Of the twenty persons originally employed on the permenant staff of the department, seven were immigration officers (who were eventually transfered to the Department of Crown Lands), and the remaining thirteen included the Under-Secretary, three clerks, an accountant and eight engineers (Noonan, 1975, p.9-10). The department was divided into two sections; technical and administrative. Initially the Under-Secretary was the permanant head and responsible to him was the technical head, the Engineer-in-Chief. New Zealand was divided into areas, each with its own district engineer responsible to the Under-Secretary. Engineers were also appointed to specific works or activities and were also responsible to the Engineer-in-Chief. Conflict occurred between the administrative and technical sections over managment of the department [and was emphasised when an engineer was appointed as Under-Secretary]. This was eventually resolved in 1920 when F.W Furkert (again an engineer) became Under-Secretary under the Coates administration. During this period, through the partnership of Furkert and Coates, the Public Works Department gained momentum and further entrenched the engineering perspective over water resource use and management.

In developing New Zealand's economy, priority was given to those public works projects which enhanced settlement and primary production. This emphasis on primary production was to have important ramifications on the methods used to combat the problem of soil erosion and flooding. In the meantime, the department became involved in hydro-electric development with the first scheme being commissioned in 1914. Crown control over water rights for hydro-electric production was established by the Electric Lines Act 1884 (Pickering, 1949). The Public Works Department became responsible for the investigation and selection of suitable sites for water power development, the design and construction of hydro-electric installations (either directly or by contract) and for the design and construction of transmission

lines and substations. The department also played a major role in framing supply and wiring regulations, the registration of wiremen and electrical inspectors, and in the establishment of power boards (Noonan, 1975). Water resource control also extended to include irrigation design and construction with 41,900 acres developed in 1929-30. Not only did the department design and construct these schemes but on completion took control of them further extending the departments influence in water resource management *(Ibid* p.116).

The 1930's and early 1940's saw the Public Works Department cement its associations in environmental control and management. Hydro-electric development was well under way and the department became involved in what was described at the time as being the most advanced piece of environmental legislation in the world - the Soil Conservation and River Control Act 1941 (Acheson, 1968; Newnham, 1946; McCaskill, 1975; Noonan, 1975). However due to the Second World War most major peace-time works were suspended, including those planned under the new Act, and projects concerning war production were given priority (see Newnham, 1946, p.100-1).

With the passage of the Ministry of Works Act 1943, the Public Works Department underwent a change in structure and policy direction. The Act was established in order to help convert the economy back to a peace-time basis without seriously disrupting it. The Public Works Department, combined with the new Ministry of Works (M.O.W), now entered into a new phase of reconstruction (Newnham, 1946). It was envisaged that the new Ministry's role would be to study "every major proposal that other Government departments were considering, examine it objectively in relation to other calls on Government finance, and establish its priority" (see Noonan, 1975, p.178). The principle functions of the M.O.W at the time were:

(1) To ensure that during the post war reconstruction period all proposals for construction (whether or not these favour the direct expenditure of Government moneys or subsidies) are ranked in order of priority.

(2) To ensure that all schemes for construction involving expenditure of Government

funds are thoroughly examined independently of the source from which they originate, both from an economic and technical point of view. This not only includes government departments but also those proposals of local bodies or of private interests which carry Government subsidies.

(3) To ensure that projects approved for construction involving the direct expenditure of Government moneys or subsidies are executed efficiently and economically, whether such works be carried out by the Government itself or by the subsidised authority.

(4) To ensure that no work is undertaken in conflict with the national interest and relate proposals for construction to an established national plan (Newnham, 1946, p.106)

With the establishment of the MOW, the Public Works Department though still remaining a separate body, underwent substantial reorganisation. The main feature was the creation of four divisions: engineering, architectural, housing and administration. The Engineer-in-Chief however, still remained the 'permanant head of Public Works Department' (Noonan, 1975, p.181). These structures lasted until May 1948 when the P.W.D was merged with the MOW under a Commissioner of Works. The Act in effect created a 'mega-department' that had control and input into almost every sphere of economic and technical development in New Zealand. The MOW as at 1975 administered over twenty Acts of Parliament and was represented on over seventy five statutory and other bodies, from the Water Pollution Control Council to the Taupo Town Planning Board (Noonan, 1975).

Prior to World War Two, concern had been expressed about the problems caused by flooding and soil erosion.

> "At present the flood problem occupies a prominent place in the thoughts of the public. It is undeniable that floods are becoming of more importance as time goes on. They are bought before our notice with greater frequency, and the damage to property and the loss of life increase with the growth of population" (Furkert, 1928).

However due to the Second World War, major works projects had to be suspended including implementation of the Soil Conservation and Rivers Control Act 1941 which was to be fundamental in catchment control and management. During the post war reconstruction period this Act was consequently given high priority, and those problems which were recognised as early as 1919 in a report commissioned by Government concerning the state of five major rivers in the South Island, could be addressed (see Acheson, 1968, p.18). The next section will firstly outline the role engineers played in framing the above Act and secondly, how they came to dominate future water resource use decisions.

3.4 DEVELOPING A WATER RESOURCE USE STRATEGY

Before the Soil Conservation Rivers Control Act was passed the initial Bill that went before Parliament was called the Rivers Control Bill. The principal reason for this was arguably due to the dogma of the Public Works Department which encapsulated river control and management. This dogma was clearly revealed in a paper entitled "The Control of Rivers" by F.W Furkert, the then Under Secretary of the PWD.

> "There are two main lines of thought along which this problem may be approached. One calls for the construction of engineering works adequate to keep the river within predetermined and comparitively narrow limits; the other leads us to the abandonment of flooded country as unsuitable for the use of man. In view of increasing population, it is unthinkable that our efforts should follow the second direction, implying as this would, a retreat of civilization before the forces of nature. As one writer puts it "a way can always be found to satisfy the requirements of nature without defeating the legitimate purposes of civilization" " (Furkert, 1928, p. 33).

As McCaskill (1975) points out, it was this philosophy which dominated water resource use and management for many years. Although concerned with the protection of settlements and assets from the risks of flooding and associated damages, Furkert's statement was indicative of a much broader perspective which has come to dominate water resource use in New Zealand and which came to be exposed in the Kaituna River claim. That perspective, as borne out in the engineering profession, is one of humankind's ability to control and manipulate nature in order to fulfil specific needs and desires. In some cases, the application

of technology can result in a lessening of environmental responsibility simply because it is assumed that technology can solve all problems.

It became apparent that river control on its own did not provide an overall solution for effective water resource management. Work by Taylor (1938), Zotov (1938) and McCaskill revealed the extent to which the problems of flooding were caused not so much by the lack of adequate river control structures, but by that of soil denudation in the upper parts of catchments. In 1938 as a result of serious flooding in East Cape, North Island (McCaskill, 1975, p.15) the Department of Science and Industrial Research (D.S.I.R.) published a paper entitled "Maintenance of Vegetative Cover in New Zealand, With Special Reference to Land Erosion" which outlined the causes of varying types of land erosion. This paper was later to influence significantly formation of the 1941 Act. Intense lobbying by interest groups and individuals, including L.W McCaskill from the Canterbury Progress League, further stimulated a change to the original Bill which was primarily intended being largely based on river control measures.

In March 1941 the House of Representatives set up a Select Committee "to enquire into and report upon such questions relating to the protection of property from damage by floods and erosion and to the control of rivers generally as might be refered to it by the House or Government" (*Ibid*). After much discussion and debate it was realised that the problem involved not only river control but also that of soil conservation.

> "The original name of the Bill was the Rivers Control Bill. but the Committee had not long been sitting when it realised that to control rivers alone would not cope with the problem at all. We saw that if there were no control at the source, control lower down would not be entirely satisfactory. The Committee, therefore, changed the name to Soil Conservation Rivers Control Bill" (In Hansard 1941, Vol 360, p.508).

The Committee then adjourned to allow further drafting of the Bill to include those issues pertaining to soil conservation. The revised version was then presented to W.L Newnham,

Engineer-in-Chief of the Public Works Department, who was then largly responsible for the form of the review of the Bill. Once again engineers, through the P.W.D, were instrumental in determining the direction of this new proposed legislation.

When the revised Bill was read in the House it became patently obvious which direction and form the new Act would take.

> It is an engineers problem. The men who are to solve it must be men of trained minds - men who have given a life time study to the question. We have had thirty to forty years with laymen at work, with the result that disaster has almost overtaken us... It is a national responsibility, and demands the exercise of the skill of the engineering world... we are able to get to the root cause of the trouble today as a result of the skill and knowledge of the engineering world and the years of experience of other men attempting to overcome those difficulties... I know the approaching dangers if the job is not tackled scientifically" (Semple in Hansard vol. 360 p.504-507).

This view was resoundingly endorsed by many other Members of Parliament, including Mr Wilson, Chairman of the Select Committee, who also saw the answer to the problem lying with the engineering profession:

> "Soil Conservation is a scientific study and a scientific approach must be made to the problem. For that reason, use will be made of the foremost engineering brains in the Dominion and the technological that is possessed by officers in Government Departments that are affected, and other parties who from experience or special study can make a contribution to the work" (*Ibid*, p.748).

The Soil Conservation Rivers Control Bill proposed to bring together those Drainage and River Boards which had previously been administered through various other Acts under one governing body - the Soil Conservation Rivers Control Council. This, it was envisaged, would mean an end to what had been described by the Hon. T. Armstrong as "merely tinkering with the problem" and providing only "patchwork solutions" (*Ibid*, p.541). "The (Rivers Control) Bill provided for a unified control over the whole of the catchment of a river or group of rivers. This was a big advance on the existing system whereby a small local authority in most cases controlled only sections of a river, or even only one bank of a river"

(McCaskill, 1975 p.24). It was also seen that with such technical expertise available, it was going to be a boon to the wealth production of the country when soil deterioration was arrested and settlement made profitable from a national and private point of view (Hansard vol. 360. p.492). The Bill was made law on September 29, 1941.

What was emphasised during the passage of both Bills through Parliament was, firstly, that a technological response to the problem was deemed the most appropriate, and, secondly, that the engineering profession through the PWD should have sole rights to allocate responsibility for management and control. A reliance on the expertise of the engineering profession and their ability to solve water resource problems was explicit in passing the Soil Conservation Rivers Control Act. This perception was left unchallenged even when the PWD failed to recognise the importance of soil conservation in upper catchments and had to have it pointed out by 'non engineers'. Because the solution was seen in terms of science and technology, with engineers acting as the dominant proponents, control and responsibility for conserving and controlling water resources was passed to them.

The next section will outline and explore the institutional structures set up under both the 1941 Act and its successor - the Water and Soil Conservation Act 1967. In doing so, it can be shown how the engineering/technological perspective maintained and further advanced its dominance in water resource use.

3.5 WATER AND SOIL LEGISLATION: 1941 AND 1967

New Zealands early rural era represented a period of agricultural development that had the principal objective of increasing primary production output. During this time, the soil conservation and rivers control effort was directed towards creating works that would enable more land to be developed. With increasing population and improved technology came a trend towards more intensive farming and the rapid growth of urban communities. Thus the effect was to increase pressure on water and soil resources in an attempt to achieve greater prosperity (NWASCA, 1988).

When the 1941 Act was established it was a reflection of those values New Zealand society held at the time. These values were consequently embodied in the long title of that Act. "An Act to make provision for the conservation of soil resources and for the prevention of damage by erosion, and to make better provision with respect to the protection of property from damage and floods". Having established thus far that the engineering profession through the P.W.D were primarily responsible for the implementation of the water and soil legislation, it is the intention of this section to explore firstly how that perception found expression in the structures set up under the Act, and secondly how the engineering profession maintained control in the face of changing public values.

The 1941 Act, in essence, was an Act designed to prevent damage to property, lives and production while further enhancing economic prosperity by bringing more floodplain land under cultivation. The main objects of the Act were:

(1) The promotion of soil conservation.

(2) The prevention and mitigation of soil erosion.

(3) The prevention of damage by floods.

(4) The utilisation of the land in a manner tending towards the attainment of these objects.

The structures set in place by the Act, sought to maintain the objectives of resource control and development. In light of this therefore, the Act provided for the establishment of the Soil Conservation and River Control Council as the central authority on soil conservation and river control work, with executive responsibility remaining in the hands of the PWD and later the Ministry of Works (Acheson, 1968). The Act also established Catchment Boards charging them with the administrative functions of the Act.

Section 126 (1) gave the Catchment Boards the responsibility of minimising and preventing flood and soil erosion damage within their respective districts. Other functions of the

Catchment Boards included:

(1) Controlling or regulating the flow of water towards and into water courses.

(2) Controlling or regulating the flow of water in and from water courses.

(3) Preventing and lessening any likelihood of the overflow or breaking of the banks of any watercourse.

(4) Preventing or lessening any damage which may be occassioned by any such overflow or breaking of the banks.

(5) Preventing or lessening erosion or the likelihood of erosion.

(6) Promoting soil conservation.

Also each Board was expected to prepare submissions to the Minister of Works and the Council, regarding either a general scheme or schemes of work designed for preventing or minimising damage by floods or erosion within each district or part of each district. This was to determine the extent of financial assistance Central Government would give to each Scheme. In the case of large comprehensive schemes such as the Kaituna River Catchment Control Scheme 1975, financial assistance would normally be generous given the unlikelihood of those people rated by the Catchment Boards being able to fund the Scheme in its entirety. Catchment Boards were also able to exercise all the powers given to local authorities by the Public Works Act 1928.

The 1941 Act, at the time of its conception, represented a great move forward in developing the conservation and preservation of New Zealands water and soil resources. The principal motivation behind the Act was to enhance economic development. As a result, scientific and engineering expertise were used to design and implement control structures such as groynes and levees thus enabling greater economic productivity of river hinterlands. However as it should be the intention of legislation to reflect those values society holds as important, and be the 'embodiement of a common moral position' (Turner, 1985), it is necessary to keep reforming pieces of legislation to reflect those changing societal values.

> "The community's changing interests and values have had a large influence on the philosophical approach of the New Zealand water and soil conservation organisation. In the early years, the large involvement of industry and departmental interests on the Councils (set up under the 1941 Act), reflected a departmental philosophy. Later, the growing environmental awareness changed the original approach into one of sustainable development (to reflect) a mix of indusrty and broader community interests such as those of fisheries, recreation and Maori values" (NWASCA, 1988).

In 1967 the Water and Soil Conservation Act was passed and as the long title sets out, it is

> "An Act to promote a national policy in respect of natural water, and to make better provision for the conservation, allocation, use, and quality of natural water, and for promoting soil conservation and preventing damage by flood and erosion, and for promoting and controlling multiple uses of natural water and the drainage of land, and for ensuring that adequate account is taken of the needs of primary, secondary industry, community water supplies, and all forms of water based recreation, fisheries and wildlife habitats, and of the preservation and protection of the wild, scenic, and other natural characteristics of rivers, streams and lakes."

The stated objectives of the Water and Soil Conservation Act 1967 differ from that of the 1941 Act in that it shifted emphesis from an Act largely designed for providing for preventative control measures, to that of an Act incorporating a wide range of 'multiple uses'. In effect the 1941 Act was concerned primarily with ensuring the sustainability of a soil resource while the 1967 Act reflects the need to develop a framework in which competing interests for a water resource might be heard.

As with the 1941 Act, the MOW maintained over-riding executive responsibility. This includes control over all Government moneys, subsidies and grants relating to the implementation of catchment control schemes and water works. As from the 1967 Act and under the continuing direction of the MOW, the National Water and Soil Conservation Authority (NWASCA) became responsible for the administration of the Soil Conservation Rivers Control Council and the Water Resources Council (until both the Councils were abolished in 1984 and responsibilities incorperated into an enlarged NWASCA). From this structure emerged the Regional Water Boards and Catchment Authorities (see Fig 3.1) which played major roles in developing the water resource use strategy of the Kaituna River

catchment resulting in the claim being laid by Ngati Pikiao.

However, although the Water and Soil Conservation Act 1967 was an Act designed to manage competing interests in the arena of water resource use, and Maori interests were allowed representation on NWASCA, it was no more than a token gesture. The long title of the Act sets out those interests of the dominant culture to be safe guarded and does not stipulate the protection of Maori traditional cultural values. Though there exists a stated aim of 'resource sustainability', this relates only to that perspective of the dominant culture. Maori values are not recognised. Given the conflict which arose in the Kaituna River claim the next section will explore how it was that Maori values, rather than being in opposition to those of the dominant culture, are in many ways complementary.

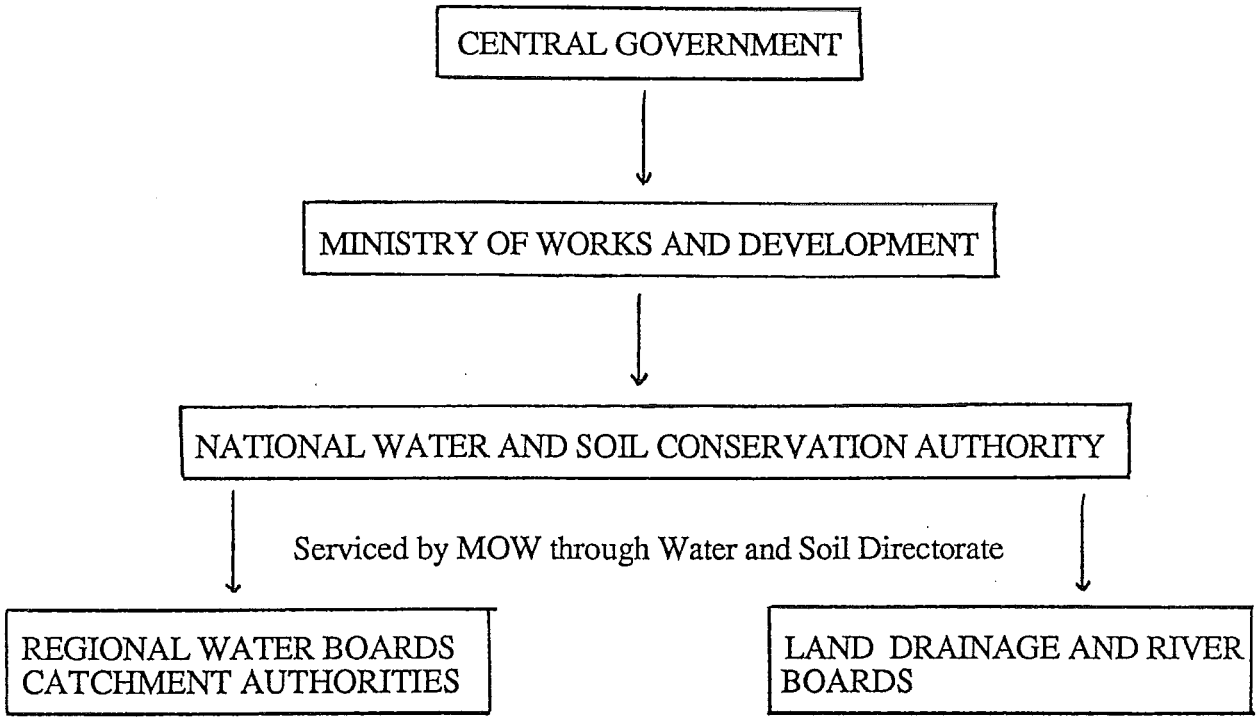
3.6 THE DOMINANT PERSPECTIVE CHALLENGED

> "In our view it is not entirely relevant to consider whether the Te Atiawa contention is corroborated by scientific evidence. Indeed we question the extent to which scientific evidence should be preferred. The Maori lore as inherited by word of mouth, represents the collective wisdom of generations of people whose existence depended upon their perception and observation of nature. We do not consider the weight given to scientific evidence should be such as to denigrate the worth of customary lore, or to inhibit Maori people from relying upon it. In the final analysis it is the test of experience (and the generations of the future) that will determine the worth of scientific postulates." (Wai.6, para. 7.3)

This statement from the findings of the Waitangi Tribunal on Te Atiawa (Motonui) claim is indicative of the problems which exist between two world views. The dispute between the Ngati Pikiao and those institutional structures representative of the dominant cultural perspective, reveals fundamental differences. It was the contention of this chapter to show that through the emergence of one perspective in developing water resource use, those values maintained an exclusive division of resource utilisation. However Ngati Pikiao, through the Waitangi Tribunal, have challenged that perspective previously thought to represent one of the the most progressive forms of water and soil management in the world.

FIG 3.1

WATER AND SOIL CONSERVATION ADMINISTRATION IN NEW ZEALAND PRIOR TO 1988



One perspective, because of its scientific and technological status, was thus able to provide the panacea for soil erosion, flooding, and waste disposal problems. This that meant environmental responsibility became less of an issue than it might have been and an ecological crisis has emerged. No better was this illustrated than in the Kaituna River claim when it was proposed that in treating the effluent to a scientifically pure standard risk to the river would be minimised. It was argued that the treated effluent would be higher in water quality that what is already presentin the river.

The Ministry of Works during the hearing, claimed that the treated effluent would in effect be 'scientifically pure' (see Watson, 1984) and hence present no threat to the river and estuary ecosystem. This was contary to the evidence by Till (1984) who argued that entro-viruses could still remain active even though the water might be treated (this does not include the emergency discharge of untreated waste into the river allowed under the enabling water right). The argument by the Ministry was that through the use of technology, all possible contingencies would be met, thus enabling effluent disposal to occur within a desirable economic framework. In reporting on land disposal as a preferred option for solving Rotorua City's effluent problems, the Waitangi Tribunal succinctly summed up the position of the dominant cultural attitude towards water and waste:

> "We are inclined to suspect that little attention has been focused on land disposal in New Zealand because water disposal is so much easier and because of the ready access in this country to lakes, rivers and the sea. It may be that increasing quantities of effluent now demand much closer attention to the ecological consequences of water disposal especially in the case of inland towns like Rotorua" (Wai. 4, para. 8.7).

The result of the Kaituna River claim uncomfortably points out the inadequacies of the present system in dealing with waste disposal. Although the pipeline may have been the most appropriate option based on technical and economic factors it was not, in the eyes of the Waitangi Tribunal, the most environmentally appropriate method of disposal. The arguments presented by Ngati Pikiao regarding water resource use and management are based quite clearly on sound environmental principals - why pollute the area in which you gather your

food?

The Pakeha, or dominant culture, in progressing from a reductionist Cartesian philosophy, developed what Pepper (1984) described as a 'cultural filter' with nature and ecology being a function, not of what is 'out there' but of how it is perceived. Though not peculiar to western culture, that filter effects how the environment is viewed and hence used. The Ministry of Works and Development proposed to solve Rotorua's sewage and eutrophication problems by discharging the effluent from the upper Kaituna into the lower Kaituna River. By dividing the area into separate compartments the problem was solved (reductionism). The Ngati Pikiao on the other hand viewed the water system in its entireity, or what Shearer (1987) terms as in a 'holistic' manner. This reductionist perspective thus dictated the way in which waste was disposed of. The question which has arisen as a consequence is that of whether a scientific and technological perspective on its own is reflective of a bicultural system of water resource management.

3.7 CONCLUDING REMARKS

The responses made to the effluent disposal problem in Rotorua by the Ministry of Works and Development was the result of an institutionalised perception of water resource use. The process by which the decision to initiate implementation of the nutrient pipeline was a reflection of those values the dominant culture holds, stemming as they do from the application of scientific and technological principals in water resource development. The lodging of the Kaituna River claim in 1978 represents the first comprehensive challenge to that perspective by questioning the validity of those prevailing water resource use management strategies.

The water and soil legislation had its genesis in a period when while the mistakes of the past were realised, and if economic development was to continue, then resource conservation had to occur. The legislation was then enlarged upon to develop policies that would take into

account competing interests. What emerged from the two major pieces of water and soil legislation and amendments was an 'either or' philosophy. Either development, or conservation. Resources, especially those of water were viewed as an economic good and hence could be used as such.

What the Kaituna River claim did was to turn the 'technocratic' argument back on itself. When the Ministry of Works and Development claimed that the pipeline proposal offered the best economic and technical solution to the problem of sewage disposal and eutrophication, it was based on a premise of western ideals - those of the dominant culture. What it failed to do was to consider other cultural perspectives which may offer an equally valid solution, based though on another value system.

The argument operates at two levels with the most obvious being concerned with the need to recognise Maori traditional values in resource legislation. This will be discussed more fully in the following chapter. At a deeper level it becomes a question of moving past the 'blinkered view' of 'technology is best', to encompass and absorb what is for the dominant culture, ideas that do not fit comfortably in the technological ethic.

CHAPTER FOUR

MAORI VALUES AND LEGISLATION

4.1. INTRODUCTION

> "Our society is basically secular and individualistic. We believe humankind has authority over nature which entitles us to make large scale modifications to the natural environment for personal and corporate gain. In more modern times we have seen the need to constrain development for the maintenance of better environmental standards and to retain more of the natural environment. Our approach is still rational and secular. The right to develop is presumed. The need for constraint has still to be proven" (Durie, 1987).

Having in Chapter Three explored how the engineers (as reflecting the values of the dominant culture) developed and maintained control over water resource use and management, it is the intention of this Chapter to explore how that control is giving way to a more equitable and just system which takes account of both Maori and Pakeha values of water. It will be shown that Maori traditional values seek development, not from a technological, scientific approach, but from a position which encompasses the collective wisdom of traditional Maori lore. This in effect establishes the right of Maori traditional values to be accounted for in the decision making process concerning water resource management. Rather than dominion over nature (see section 3.2), traditional Maori view their role more as kaitiakitanga [(guardians), Wai. 8.; Taylor and Patrick, 1987].

> "People do not have authority over nature because they are part of it. They belong to it. The spirit world pervades all aspects of nature, and the Maori belong as much to the unseen world, the only permanent world, as to the more transient world of the living. The result is, that using the spiritual base of Maoridom, the duty to maintain is presumed. The need to develop must be proven... the onus of proof is shifted to the developer." (Durie, 1987)

This chapter seeks to determine the nature of Maori values in relation to the environment, and in particular, what is meant when these are spoken of today (Shearer, 1986). Traditional

Maori lore is used to present a world view, incorporating both the natural physical world and the spiritual realms. Such lore guides traditional Maori society in its approach to environmental management, with that lore still being taught on the marae today. The previous chapter explored how by defining water resource management through one particular cultural filter, one culture's structures and institutions were set in place to resolve the problem of Rotorua's sewage disposal . It became a question of whoever defined the problem, developed the solution.

The following sections will explore those Maori values pertinent to water resource use and management. In order to do so effectively, it is imperative that an understanding be achieved as to the origin of those values. To facilitate this end, Maori mythology and the governing principles underlying water resource use will be examined. In doing so it can be shown that the water classification system used by the Maori, although stemming from a spiritual rather than technological base, is compatible with some of the principles espoused in the 1967 Water and Soil Conservation Act.

Having therefore established a foundation, Section 4.3 will specifically discuss the relationship between Ngati Pikiao, the Kaituna River, and surrounding water system. By doing so this will provide a clearer focus of those spiritual, cultural and traditional values held by the Maori in relation to a particular water resource. Thus in demonstrating that water resource management has been dominated by one particular culture, the next step is to outline those reasons for the inclusion of Maori values into legislation. To achieve this end, the Treaty of Waitangi will be discussed, together with the arguments surrounding the interpretation of the Treaty and its current status in legislation. It will then be shown that Maori values have legitimacy and is in cases, complementary to the present movement in the environmental legislative review.

4.2 THE MAORI ENVIRONMENTAL PERSPECTIVE

4.2.1 Adaption to a new Environment

It is estimated that the ancestors of the Maori left their East Polynesian homeland about 800 - 1000AD (Orbell, 1985; Leach, 1987). "These immigrants were not fishermen who had been blown off course and cast upon these shores by accident... they came on a carefully planned expedition, deliberately setting out to discover a new land" (Orbell, 1985). Upon arrival in Aotearoa the immigrants had to adjust from a tropical environment to a temperate climate with pronounced seasonal rhythms and to discover the resources of the country and the conditions it imposed on them. In most cases the food crops and cultivation techniques bought with them proved to be inappropriate for the conditions encountered. The early Maori therefore relied heavily on the hunting of animals and birds, and foraging in the forests (Orbell, 1985; Shearer, 1986).

During this period of early Maori settlement major environmental modifications occurred including the burning of large tracts of South Island vegetation and a depletion of crustaceans around some parts of the North Island coast. At first terms were imposed upon the immigrants as they struggled to adapt to an unfamiliar environment. As numbers grew, the terms altered, and the Maori forced changes over the land (Leach, 1987). These modifications were not deliberate, but more as a result of a people attempting to survive within an environment of which they initially had little knowledge or a complete awareness of their actions (Shearer, 1985). In archaeological excavations in Palliser Bay, Wairarapa, the actions of the early Maori were shown to be disastrous. Anderson suggests however that " it would be invidious to draw the conclusion that the inhabitants were ignorant of, or unsympathetic to, the need for shellfish conservation; it may well have been a luxury they could simply not afford" (cited in Shearer, 1986).

It can be seen therefore that the early Maori were exploiters of their environment. In the

first two centuries of Maori occupancy, nearly all of the 22 species of moa disappeared and about a dozen other species of bird, including an eagle and harrier hawk were hunted to extinction (Orbell, 1985 p.21). In some areas along the Wairarapa coast, on the top levels of shell midens there were paua shells so small a pin was needed to get anything out of them. Yet down the bottom of those same midens there were shells as big as basins. Initially, the Maori ate and ate until everything was gone. However in a later phase, after they had gone through periods of self inflicted hunger the Maori started to develop storage techniques. From this development, a cultural turning point was achieved from which Maori society evolved for itself a system of environmental protection rules (O'Regan, in Douglas, 1984).

In adapting to a new environment, the early Maori immigrants maintained a 'hand to mouth' society, slowly developing an appreciation of the natural world which they habited. This appreciation developed into an understanding and awareness of the natural world which found expression in a spiritual ethos. The following section sets out to explore that ethos and its connection with the environment as expressed through Maori mythology.

4.2.2 Maori values through Mythology

For the Maori, survival instilled a profound understanding and knowledge for the resources the environment offered them (Orbell, 1985). This knowledge and understanding intense emotional and spiritual ties which provided a sense of belonging, security and sustenance. This is exemplified by the unique way in which the Maori identifies him/herself in day to day usage in what Yoon (1986) describes as a 'motto maxim' or pepeha. This is a folk lore genre which establishes a Maori's special relationship with tribal territory, especially in relation to prominent landmarks. An example of a pepeha taken from an interview with Mrs Here Peina and a Rangatira from Whanganui (cited by Yoon, 1986, p.52] is:

Ko Tarawera te maunga	- Tarawera is the mountain
Ko Rotorua te moana	- Rotorua is the lake

Ko Te Arawa te iwi - Te Arawa is the people

Intense feelings for land were often associated with mountains or rivers within a tribal territory. For Ngati Pikiao, the Kaituna River provided a basis for identification, belonging, and tribal mana. This is often expressed in the following way:

"Nga-wai-koe - What (water) are you?
No-wai-koe - Who am I?

In answering the questions posed, an image forms of the person, their area, resources and way of life. The pepeha sets out their identity, both singular and tribal, and provides an 'unwritten postal address' (Yoon, 1986; Taylor and Patrick, 1987). For Ngati Pikiao it is the Kaituna which provides the physical and spiritual sustenance for the tribe. In presenting the world view of a Maori, there is an acknowledged difference in traditions and interpretations between each whanau (family), hapu (sub-tribe) and iwi (tribe). Despite such diversity of views there exists a unity to which Maoritanga can subscribe (Gray *et al*, 1988). Ideas relating to the origin and nature of the world are traditionally visualised through the natural world and given voice in myths, songs and narratives. Mythology is used by the Maori to explain the origin (creation) of things in the world and to reflect important principles of traditional Maori society (Yoon, 1986).

For the traditional Maori, the source of all life stems from Io-Matua-kore (Creator , Supreme Being). From Io is created Ranginui-e-tu-nei (Sky Father) and Papatuanuku (Earth Mother), the primal parents of the natural and experienced world. Begot from the union of Ranginui and Papatuanuku were seven children - Ruaumoko still being inside the womb;

Tane-mahuta	The god and father of the forests and all living things within them,
Tumatauenga	The god and father of humanity and war,
Rongo-matane	The god and father of the sweet potato and of cultivated foods,

Haumia-tiketike	The god and father of fern roots and other wild foods,
Tangaroa	The god and father of fish and reptiles,
Tawhiri-matea	The god and father of wind and storms,
Ruaumoko	The god of earthquakes and volcanoes

(Yoon, 1986; Gray, 1988 personel communication).

The myth tells of how the children tried to force Ranginui and Papatuanuku apart in order that they have room to live. Tane succeeded by planting his feet firmly on Papatuanuku and forcing his way up (forest generation) thereby separating his parents. However Tawhiri, angered by the cruelty shown by his brothers towards their parents, sided with Ranginui, while the others with Papatuanuku. Tawhiri waged war on his brothers causing Rongo and Haumia to flee into the folds of mother earth and the forests of Tane to be flattened. Tawhiri then attacked Tangaroa causing huge waves to frighten the inhabitants of the sea. Tangaroa's mokopuna (grandchildren), Ike-tere (fish) and tu-tewehiwehi (reptiles) disputed as to how they could avoid the storms of Tawhiri so they split, with Ike-tere fleeing to the ocean while Tu-tewehiwehi going inland to the forests.

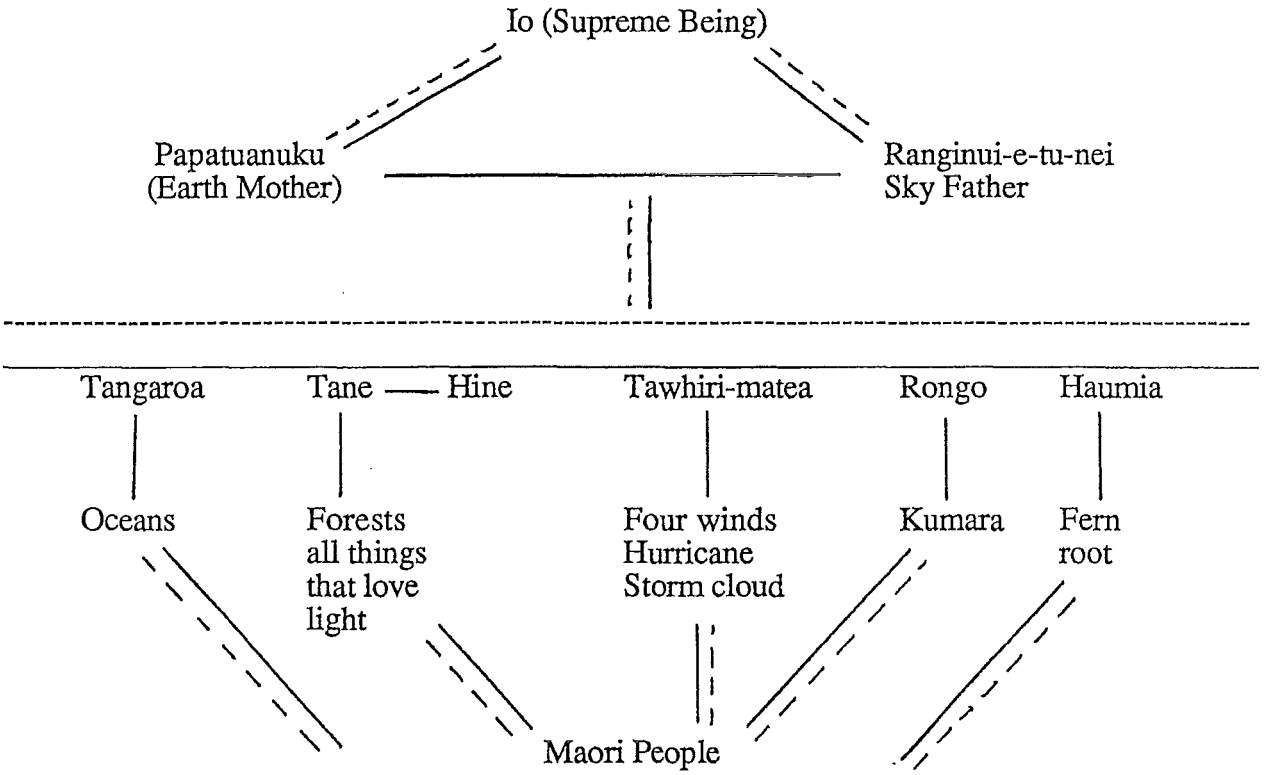
This angered Tangaroa, having lost one of his mokopuna to Tane and so has waged war with him since (waves pounding the shore).Tu-mataunga stood unshaken before Tawhiri on the breast of Papatuanuku and so was the only one to defy Tawhiri. Tu was angered by the cowardly display of his brothers in the fight against Tawhiri and so decided to take utu (retribution, balance). As a consequence the atua (god) of man moves people to cut down trees, hunt birds, catch fish, harvest foodstuffs and uproot tubers. Tawhiri remains unconquered and is still an enemy equal to humanity in strength (Yoon, 1986). As Tane was atua (god) of the forests and all that dwelled within them, it was from Tane that the first human beings were created. Tane fashioned the first woman - Hineahuone from clay, but was unable to give his creation life. For this, Tane turned to Io-Matua-kore to receive the spiritual essence of life - the mauri ora. Hence the oft used expression in Maori speeches "Tihei mauri

FIG. 4.1

TRADITIONAL MAORI RESOURCE MANAGEMENT SYSTEM AND ITS BASES

WITH

SPIRITUAL RELATIONSHIPS WITH GODS, NATURAL WORLD AND HUMANS *



_____ Interdependence for continuity (land, humans and nature)

------- Mauri: life and energy source, spiritual force

From Williams (n.d)

* This primodial relationship differs between each tribal group and so while some characters do not appear in the lore of one hapu, they might in another.

ora" I sneeze - it is the breath of life. Hence the numerous species of trees symbolise Tane's quest to find the female element. From the union of Tane and Hineahuone came forth all offspring (Gray *et al*, 1988). Mauri exists in all things, animate and inanimate, and it is from this concept of mauri the Maori is able to view the natural world in a holistic manner.

Myths serve to reinforce the concept of interdependence between the Maori and their environment. Each hapu or iwi use different myths to explain their origins in relation to tribal territory. By using mythology in such a way, claims to the land or a resource can be substantiated and strengthened through the notion of ahi ka or (lighting of fire), by maintaining a presence in the area concerned. The environment can be seen in terms of a family (see Fig 4.1). Traditional Maori can trace their whakapapa (genealogy) back through the environment to their atua. An example of this comes from the Ngati Tamaoho people of Whatapaka marae on the eastern shores of the Manukau who claim a special relationship with the harbour from their whakapapa. "They claim descent from Papaka, who is depicted on the maihi of the meeting house. Papaka, it is said, was put off the Tainui in the middle of the Manukau Harbour. He swam to the sand bar in the interior of the waters where he survived on kaimoana or seafood of the harbour. In time Papaka became half man, half crab. His children left the waters in the form of man and intermarried with the local people. Thus it is claimed;

> "The Manukau not only belongs to us but we to it. We are a people begotten from within the depths of its waters." (Carmen Kirkwood)
> [Wai. 8. para 3.2. p.20]

4.2.3 Maori Resource Values

The creation myth, expresses the whakapapa (genealogy) links of the Maori people, between the natural and human world, and that of the inherent spiritual forces. This can be seen as a projection of the principles which govern Maori society. The important ones

expressed here are Mauri, Tapu and Mana. These are crucial concepts in attempting to understand the Ngati Pikiao claim to the Waitangi Tribunal.

Mauri

Mauri (or life principle) is the elemental energy derived from the realm of Te Korekore out of which the universe was created (Marsden, 1975). "In humans it is of a higher order called mauri ora which carries with it conditions of responsibility, giving humans place and purpose within the total created world. Through mauri, all things are linked in nature, being created from Te Korekore. As all things are descended from common ancestors, so all elements of the natural world possess life, a universal living spirit. Because in everyday life use is made of the environment, there is a constant risk of limiting or affecting the mauri. To guard against this, sets of rules governing conduct and behaviour consistent with spiritual tribal (ancestral) beliefs have to be followed" (Gray *et al*, 1988).

Mana

Mana is spiritual power and authority delegated by the atua to chosen representatives to perform their revealed will in the natural, physical world (Gray *et al,* 1988; Best 1982; Marsden, 1975). Whereas tapu is the sacred state or condition of a person or thing placed under the patronage of the gods, mana is the embuement of that object with spiritual power through the in dwelling spirit (Marsden, 1975). Mana is not a term that is easily translated into English. Its equivalents can mean prestige, divine authority, psychic force and influence (Wai. 4; Wai. 6; Wai. 8; Wai. 22; Yoon, 1986).

Tapu

In manipulating the environment, the Maori holds that there are three orders of reality - the physical or natural, the psychic, and the spiritual. Whilst the natural realm is subject to physical laws these can be affected, modified or even changed by the higher laws of the

psychic and spiritual. The application of the spiritual laws is dependent upon humankind's cooperation with the gods. This is bought about by a type of contractual arrangement - tapu (Marsden, 1975).

> "The Maori idea of tapu is that a person, place or thing is dedicated to a deity and by that act is set aside or reserved for the sole use of the deity. The person or object is thus removed from the sphere of the profane and put into the sphere of the sacred. It is untouchable, no longer to be put to common use. This is the concept of tapu." (p.146)

In a secondary sense tapu can also refer to an object that is accursed or unclean. There are different forms of tapu - the temporary state, the seasonal state and the permanent state. Specific forms of the temporary state of tapu are known as rahui. This may be imposed in order to protect known fish breeding grounds or in an area where death has occurred such as that of drowning. This form can be imposed by someone with mana by establishing the mauri, a sign or talisman which restricts access to an area or resource. An application of rahui may be applied in the practice of not cleaning fish at sea as this constitutes not only physical pollution but spiritual pollution as well. A tohunga (chosen or anointed one) is in a permanent state of tapu. Noa is the complementary state of tapu. It is the state of being free from tapu and therefore available for profane use (Gray et al, 1988). Tapu is strictly adhered to through the institution of wehi and ihi. Gray *et al* defines wehi as the fear or reverence if one transgresses the gods' will. Ihi is similarly defined as the power generated by those who have mana and are tapu.

Tapu then, according to Marsden may be defined as;

> "The sacred state or condition in which a person, place or thing is set aside by dedication to the gods and thereby removed from profane use. This tapu is secured by the sanction of the gods and reinforced by endowment with mana" (p.148).

The concepts of mauri, tapu and mana do not apply only to Maori dealings in the environment but also exist in forms of traditional classification. Water in its natural form is culturally and spiritually significant to the Maori. Rain according to traditional Maori lore, is said to be Ranginui weeping for Papatuanuku, hence its sacred connotations. Rivers such as the Kaituna, consistent with both spiritual and physical values, maintained a wairua (spirit), being derived from a mauri, which can be altered or changed through pollution. It is this understanding of this author that the implications of tapu and mana impinge on the uses of water resources, such that those water bodies held most sacred may not be used for profane use. A system of classification was therefore developed to combine both spiritual and physical elements.

4.2.4 Water Classification

Waiora

Waiora is the purest form of water, it is the spiritual and physical expression of Ranginui in his longed-for embrace with Papatuanuku. Pure water is termed Te Wairora a Tane (this differs depending on tribal affiliations), and to the Maori, waiora contains a source of life and well being. Waiora is used in sacred rituals to purify and sanctify. The rain is waiora, contact with Papatuanuku gives it its purity as water for human consumption. Water can only be purified through contact with the earth, hence Ngati Pikiao's claim to the Waitangi Tribunal that though treated effluent may be scientifically pure it remains an affront to their spiritual and cultural values. Water can remain pure, as waiora, only if its contact with humans is protected by appropriate ritual prayers. Waiora has the potential to give life, to sustain well-being, and to counteract evil.

Waimaori

Water becomes waimaori when it comes into unprotected contact with humans. Waimaori, in contrast to waiora is normal, usual or ordinary, and no longer has any sacred associations.

Waimaori is the term used to describe water that is running freely or unrestrained, or which is clear or lucid. It has a mauri (generally benevolent) and which can be controlled by ritual.

Waikino

As with other statuses, waikino has both spiritual and temporal meanings. In the temporal sense, waikino is the term used to describe water which is rushing rapidly through a gorge, or water where there are large boulders or submerged snags which gives the potential to cause harm to humans. In the spiritual sense, waikino is water that has been polluted or debased, spoilt or corrupted. In waikino, the mauri has been altered so that the supernatural forces are non-selective and can cause harm to anyone.

Waimate

Waimate is water that has lost its mauri, or life force. It is dead, damaged or polluted water that has lost its power to rejuvenate either itself or other living things. Waimate, like waikino has the potential to cause ill-fortune, contamination or distress to the mauri of other living or spiritual things, including people and their food resources. The difference between waikino and waimate is the existence of a mauri (albeit altered) in the former and its total loss in the latter. Waimate also denotes sluggish water or backwater to a main stream or tide. In this instance however it still retains its mauri.

Waitai

This is the term used to describe the sea, surf or tide. Other meanings include rough, angry or boisterous like the surf, or the surge of the tide. It can also be used to distinguish between fresh and sea water. Waitai is water which has returned tangaroa through the natural process of generation, degradation and rejuvenation (Douglas, 1984 p.5).

> "The idea of pollution is something Maori have always been able to cope with. We have always had pollution and always have had ways of cleansing pollution. We've had ritual pollution and ritual cleansing,

> but we do have a need for some places never to be polluted. Those places are the ones that we are increasingly asserting, must be kept clean." (O'Regan in Douglas, 1984 p.11)

Separate water streams are used for cooking, drinking and cleaning. Waste water is purified by return to the earth, ritualistic purification, or in the exception of water containing animal wastes, by mixing with large quantities of pure water. Conceptually each water stream carries its own mauri (life force) and wairua (spirit) guarded by a separate taniwha (water demon) and has its own mana (status) [Wai. 8 para 7.2].

At this point the similarities of Maori and Pakeha systems of water classification can be drawn out which though from a different perspective, stem from conservation first principles. While the Maori traditionally operates from a spiritual and cultural basis of water classification as previously discussed, the Pakeha method is more from an economic standpoint. The long title of the Water and Soil Conservation Act 1967 sets out the principle of 'multiple use' in which those values of a water resource must not be in conflict with the public good. Thus private uses of a water resource are subject to water right hearings, and objections may be laid if there is conflict over that proposed use. In effect, both Maori and Pakeha operate a system of water classification in order to maximise the returns off that resource.

Having discussed in this section the emergence of a Maori resource ethos, and its subsequent expression through the concepts of mauri, tapu and mana within an overall environmental framework, the following section, in the light of this, will outline Ngati Pikiao's relationship with the Kaituna River and ~~its~~ their responses to the nutrient pipeline proposal. In doing so it can be shown that the traditional Maori values discussed have practical application to modern environmental problems such as sewage disposal.

4.3 NGATI PIKIAO AND THE KAITUNA RIVER

The focus for the Ngati Pikiao people is the Kaituna River. The river was significant in that the tribe's mana is dependent upon the resources it can provide. The name Kaituna means 'a good feed of eels' (*kai* meaning eat and *tuna* meaning eels). As the mana of a tribe was often related to the size and quality of the koha (gift) it could give when visiting another tribe, then if that resource upon which a koha was based was diminished in capacity, then the mana of the tribe would be lessened. A gift as such represents the wealth and pride of the tribe. For Ngati Pikiao, fish especially that of eels, provided that wealth.

For the Ngati Pikiao the Waitangi Tribunal offered to them the only appropriate forum to present their case as to why the proposed Kaituna nutrient pipeline should not proceed as other tribunals were unable legally to recognise their case. Ngati Pikiao objected to the proposal on three grounds: medical, social, and spiritual and cultural.

Medical

Evidence was bought forward to show that no matter how 'pure' the effluent was, there was still a risk of contaminating both the river and the estuary. In one submission it was shown that entero-viruses (viruses that live in the gut) could travel great distances in water and still effect mussels up to 2.5 kilometres from a sewage outfall (Till, 1984).

Social

This is a fairly obvious objection as there exists a psychological revulsion of human waste which is common to most cultures.

Spiritual and Cultural

It was however the objection to the nutrient pipeline on spiritual and cultural grounds which bought evidence "that was highly-charged with emotion and remarkably convincing. Witness

after witness came forward to support the claimants in their assertion that to mix waters that had been contaminated by human waste with waters that were used for gathering food was deeply objectionable on Maori spiritual grounds." (Wai.4., para 3.11).

The thrust of the evidence of Ngati Pikiao was towards demonstrating that firstly the pipeline proposal was an attack on their fisheries, and secondly they would not be able to use the waters as a resource because the mixing of contaminated water with a food source. This being contrary to their spiritual and cultural beliefs. The kaumatua (elders) of Ngati Pikiao made it clear that if the pipeline was built then the river and surrounding flora and fauna would be declared tapu for as long as the sewage disposal continued.

> "Such a declaration would make it impossible for any food to be gathered from those waters (Kaituna River) and they (the Ngati Pikiao) would suffer a very serious loss as a result. This loss is not to be calculated solely in economic terms for the worth to them of the sea food and fish from the river is a valuable and important part of their sustenance. It would be a grave loss of tribal mana for the river and estuary to be denied to them." (Wai.4., para 3.12).

The Waitangi Tribunal saw however an inconsistency in the use of tapu. "On the one hand the claimants are saying that to discharge the effluent into the river would lead to the waters being declared tapu. But on the other hand the effluent is now being pumped indirectly into Lake Rotorua (via Puarenga Stream), yet no tapu has been declared on the waters of the lake. Furthermore, we suspected and were proved to be right, the Maori people, Ngati Pikiao and others now fish in Lake Rotorua , the Ohau Channel and Lake Rotoiti which receives the waters of Rotorua" (Wai. 4., para 3.14). In explanation, the evidence of Messrs Newton (kaumatua Ngati Pikiao) and Malcom (member Ngati Pikiao) demonstrated that tapu was a geographic and time concept. It was explained by Mr Newton that though Lake Rotorua ran red with blood after Mokoia was attacked by Hongi Ika, Rotoiti was not tapu. Tapu is a matter of territorial responsibility. In effect the lake fell outside the tribal boundaries of Ngati Pikiao and so was not a responsibility of the tribe.

Implications from literature (Marsden, 1975; Gray *et al*, 1988), and this authors understanding of tapu, it was also to be applied in the case of the Kaituna River for protection purposes. If effluent was to be disposed of into the river then there existed the risk from contamination to the flora and fauna, some of which needed to be maintained in a 'pure' state and not made profane through the discharge of sewage. In speaking on behalf of the Te Arawa Trust Board in respect of the nutrient pipeline proposal and the effect it would have on Ngati Pikiao, Mr Stan Newton stated:

> "Along the sheer cliffs of the river are many caverns and these caverns have been used by my ancestors in pre-European times as burial grounds for their dead. The more accessible of these have been declared Maori Reserves or Urupa, but there are many more unidentified on our modern maps of which nature has secreted into her fold of vine, fern and tree. It is interesting to mention here that one of those huge caverns contains a lake of warm water with an island in the centre forming a hallowed depository for the numerous remains of our ancestors; and there are many more of these caves and secret places along the river.
>
> For generations the Ngati Pikiao people, subtribe of Te Arawa, have gathered and used the kiekie flax from the cliffs of this river for weaving tukutuku and turapa panels to adorn most of the fifty two meeting houses which my Board is proud to administer and care for in its area.
>
> The Kaituna River has been and always will be the food bowl of the Arawa people and of the nation. Eels abound in great numbers and the harvest is continuous. At Maketu where the whole river used to flow into the sea, but, which is now partly diverted to another outlet, we have the almost inexhaustible supply of shellfish in cockle, pipi and mussel. The Maketu Estuary is a playground and a food bowl for all New Zealanders; why pollute and despoil it with our own human waste. The idea is completely abhorrent.
>
> The Maori concept of such a thing is catastrophic and the resultant impact would be almost indescribable. Historically it is damnable to our mana and prestige. Culturally it would be a curse on my tribe the Ngati Pikiao for ever and ever.
>
> Of the traditional chants, in waiata, pokeka and oriori and the songs of this most enchanted of all sacred rivers, I shudder in lament. My grief is likened to tear-drops over the dead; my speech is incoherent, my mana, my rangatiratanga has been shattered. I am not able to parry this onslaught with taiaha or mere; with a kotiate or a koikoi. My only weapon is the pakeha pen, which I am using to express the torture which is in within me; eating at the very root of my conscience, my hinengaro..." (Stan Newton on behalf of Te Arawa Trust Board in an objection to Water Right 904/1 and 904/3).

The Waitangi Tribunal heard from other members of Ngati Pikiao giving support to the Trust Board. The following are extracts from the findings of the claim:

"Mata Morehu spoke with deep emotion of the place called Te-Wai-i -rangi, a stretch of water near to where the discharge of the pipeline is planned. This spot on the river was he said "where my ancestors returning from battle would go to the water and rid themselves of the tapu upon them after the bloodshed of warfare." (para 3.17)

"Mrs Emily Schuster' a weaver of great skill and standing said of the Rotorua area, "we have progressed so much that the only place I can take the women is along the Kaituna River. The kiekie is essential and has to be specially treated. To get the true whiteness out of the kiekie it must be soaked in running water and the only place we can do this is the Kaituna River." (para 3.18)

"Te Irirangi Cairo Tiakiawa recited the whakapapa of his family and Ngati Pikiao thereby laying claim to the river and adjoining lands from the landing of the Te Arawa canoe at Maketu Estuary." (para 3.9).

"Tamati Wharehuia a white haired, elderly man from Te Matai, in a dramatic moment said in a ringing voice, brandishing his tokotoko (staff)

> "... if this Scheme goes ahead I want to make it clear that I will myself have to take direct action. I will take the patu that has been handed down to me from my ancestors generation by generation and do injury to stop this thing."
> (para 3.21).

Within such a belief, it is very apparent that the mixing of human waste with natural water is a grevious wrong doing, an act which would seriously diminish the mauri of the water, demean its wairua, and thereby affect the mana of those who use it and its resources. As a consequence, the Maori claims challenge the basic (European) tenet of "disposal of waste to water is an appropriate and valid use of that water" (Taylor and Patrick, 1987).

The claim laid before the Waitangi Tribunal by Ngati Pikiao is representative of a long line of grievances by the Maori dating back to 1840. The following section sets out to explore the extent to which Maori values may or may not have been included in legislation. The section will begin with a discussion as to the extent to which problems have occurred in the interpretation of the Treaty due to cross cultural misunderstandings. Consequently, the status of the Treaty will be outlined, leading to a discussion of how the same Treaty has been reassessed in recent years. In doing so the implications can then be explored in relation to the 1941 and 1967 Water and Soil Acts. From this, the need to include Maori spiritual, cultural and traditional values into water resource use and management can be examined.

4.4. THE TREATY OF WAITANGI AND ITS IMPLICATIONS

4.4.1 The Treaty of Waitangi

For over a century, the Treaty of Waitangi has been a regular subject in huis around the country. In some quarters, the Treaty has been referred to as 'the Maori Magna Carta' and as 'the great charter of Maori rights'. It has also been described as a 'fraud' and a 'sham' (Wai.6., para. 10.1). Whatever its intentions were, the Treaty has provoked much comment and discussion. The Treaty of Waitangi Act 1975 gave to the Waitangi Tribunal full powers to interpret the principles of the Treaty. For the first time since the Treaty was signed, statutes in force from 1975 onwards were able to be challenged if seen to be inconsistent with those principles of the Treaty, as determined by the Waitangi Tribunal.

To understand why Maori values ought to be considered in legislation one must turn back almost 150 years to the signing of the Treaty of Waitangi. Beginning February 6 1840, when the Treaty was signed between the tangata whenua (indigenous people) of Aotearoa and the new immigrants. The basis of the Treaty involved Britain declaring sovereign rule over New Zealand while still allowing Maori customary use of their natural resources. The Treaty of Waitangi was composed of three articles, written in both Maori and English (Appendix).

Under the English version, Article One was concerned with the transfer of sovereignty while the second guaranteed to the Maori "full exclusive and undisturbed possession" of their lands, forests, fisheries and other properties, with the exclusive right of the Crown to purchase those properties tribes were willing to sell. The third article granted the Maori rights and privileges of British citizenship (Sorrenson, 1987).

The signing of the Treaty at Waitangi, Bay of Islands, in 1840, included only part of the Northern Confederation of Tribes, not as is often presumed, from all tribes of Aotearoa. As a result, and in order to procure sovereignty over the whole of the country and thus preempt claims by other sovereign nations, copies of the Treaty were made and sent with ambassadors and missionaries to be signed by all Maori chiefs. However in producing a Treaty of such substance many problems emerged the principle one being the explanation of English concepts such as sovereignty to the Maori who were as a whole unfamiliar with such terms (Orange, 1987). The other major problem, and which was to have serious ramifications later on, was that two texts of the Treaty were produced - one in Maori and the other in English, with substantial differences in meaning between the two. The problem although complex, is readily identifiable in that the Maori relied on an oral tradition while the English subscribed to a written form of communication.

For the Maori it was those copies of the Treaty signed by the tangata whenua that were regarded as the only real and binding version. It was though, the English copy signed at Manukau and Waikato Heads which became the 'official' copy (Sorrenson, 1987). So when Governor Hobson, after signing the Treaty pronounced "he iwi tahi tatou" (we are now all one people) he would probably never have realised the ambiguity and misunderstanding that was to arise.

Translation from English into Maori presents many difficulties. Some concepts are almost untranslatable while others have a delicate nuance that must be captured precisely to pass on the correct meaning. The preamble to the Treaty was according to Orange (1987), "a convoluted expression of the Queen's desire to protect the Maori people from the worst effects of British settlement and to provide for her own subjects... 'sovereign authority' and to establish 'a settled form of civil government'. In translation, the whole was simplified and there were certain omissions" (p. 40). To translate 'sovereign authority' and 'civil government', a single word, kawanatanga, was used which did not adequately convey the true meaning of the undertaking. In translating Article One of the Treaty by which the Maori agreed to cede to Her Majesty the Queen of England "all rights and powers of sovereignty" which they possessed over their territories, 'kawanatanga', or governorship was used. This choice was not a particularly wise one as the term kwanatanga had previously been employed in the preamble. Furthermore, although the emphasis given to an absolute and lasting yielding of power by the Maori had been conveyed, the full significance of the term sovereignty was not it seems understood (Orange, 1987)

> "The concept of sovereignty is sophisticated, involving the right to exercise a jurisdiction at international level as well as within national boundaries. The single word 'kawanatanga' covered significant differences in meaning, and was not likely to convey to Maori a precise definition of sovereignty" (p. 40).

The term kawanatanga was not new to the Maori as it was referred to in Maori translations of the Scriptures and in reference to the British Governor of New Zealand in New South Wales. The word was derived from 'kawana', meaning governor, and had associations with Pontius Pilate, Roman Governor of Judea. It tended to imply authority in an abstract rather in a concrete sense. (Wai. 4., para. 4.6; Sorrenson, 1987; Orange, 1987). Under the Treaty, kawanatanga was to be exercised by a new Governor in New Zealand.

The second article was based on the terms 'rangatiratanga' (or 'chiefteness') and 'taonga' with the latter coming to mean 'all things prized and treasured'. On that basis a claim was lodged before the Waitangi Tribunal concerning the development of the Maori language (Te Reo, Wai. 11). The Ngati Pikiao also referred to the fisheries in the Maketu Estuary and the Kaituna River as being their taonga. It is interesting to note here that future claims to the Waitangi Tribunal may involve air rights as being claimed as part of the Maori taonga.

However the term 'rangatiratanga' differed from that of 'kawanatanga in that rangatiratanga as translated from the Bible expressed 'God's 'kingdom' whereas kawanatanga most often referred to rulership or principality in a vaguer sense.

> "The shades of meaning in the biblical references were not great but they were significant to Maori understanding, or the lack of it. Rangatiratanga, moreover, had been used in the 1835 Declaration of Independence to refer to New Zealand's 'independence' which Britain had acknowledged. Maori might well have assumed, therefore, that their sovereign rights were actually being confirmed in return for a limited concession of power in kawanatanga" (Orange, 1987 p.41).

However it is rangatiratanga which has the greatest significance, as this is linked directly to the mana of the chiefs. The term in English has a meaning close to "all powers, privileges and mana of a chieftain" (Prof. Kawharu in Wai. 4., para 4.7). In guaranteeing their "rangatiratanga o o ratou whenua o ratou kainga me o ratou toanga" (chieftainship of their lands, habitations and other treasures):

> "... what the chiefs imagined they were ceding was that part of their mana and rangatiratanga that hitherto had enabled them to make war, exact retribution, consume or enslave their vanquished enemies and generally exercise power over life and death. It is totally against the run of evidence to imagine they would wittingly have divested themselves of all their spiritually sanctioned powers - they would have believed they retained their rangatiratanga intact apart from a licence to kill or inflict material hurt on others, retaining all their customary rights and duties as trustees for their tribal groups..." (*Ibid* para 4.9)

The different understandings of the Treaty of Waitangi and subsequent implications for resource use and allocation found its way into the legal system. Although it is not possible or appropriate in this thesis to traverse all the arguments and Case Law which reflect the current standing of the Treaty of Waitangi it is possible to summarise the matter concisely in the following section.

4.4.2 The Status of the Treaty of Waitangi

There have been two distinct lines of argument which have formed regarding the status of the Treaty and its application in legislation. The first stems from the case Wi Parata v Bishop of Wellington (1877) 3NZLR 72 where the Courts refused to give effect to Maori customary rights unless expressly directed in legislation. Judge Prendergast, in delivering his judgement, enunciated the proposition that the Treaty of Waitangi

> "... could not transform the natives' right of occupation into one of legal character since, as far as it purported to cede the sovereignty of New Zealand, it was a 'simple nullity' for no body politic existed capable of making cession of sovereignty." (Wai.4., para 5.6.9)

Prendergast further dismissed the Native Rights Act 1865 which directed that native title should be determined in accordance with ancient custom and usage because, "a phrase in a statute cannot call what is non- existent into being." (cited in Hughes' submission Wai.22). The finding of Judge Prendergast was that Maori customary rights to their lands and fisheries had been alienated when the British assumed sovereignty. Henceforth, unless expressly set out in legislation (such as the Oyster Fisheries Act 1892 and the Sea Fisheries Act 1894) Maori values were deemed to have no legitimacy. From Wi Parata onwards Maori values failed to be adequately accounted for in legislation.

This argument is further extended as evidenced by Lord Normanby's instructions to Hobson concerning the status of the Treaty that:

> "... (the Maori) title to their soil and to the sovereignty of New Zealand is indisputable and has been solemnly recognised by the British Government..." (Wai.4., para 5.6.7)

This position was upheld in a Privy Council decision Hoani Te Heuheu v Aotea District Maori Land Board [1941] AC 308 where it was stated that rights conferred by a treaty of cession could not be enforced by the Courts in the absence of specific legislative direction *(Ibid)*. Cases which followed this line of argument include:

Inspector of Fisheries v Weepu (1956) NZLR 920

Keepa v Inspector of Fisheries (1965) NZLR 322

The second line of argument and is the first substantive argument to challenge the above position was introduced by P.G McHugh in his submission to the Waitangi Tribunal Kaituna River Claim. McHugh contended that the thrust of the Treaty and at least the early legislation in New Zealand gave legitimate legal status to Maori customary use of their lands and fisheries. [(Native Rights Act 1865; Fish Protection Act 1877; Sea Fisheries Amendment Act 1903; Fisheries Act 1903; R v Symonds 1847 (1840-1932) NZPCC 387; Re the Lundon and Whitaker Claims Act 1871 (1872-74) NZLR, 2CA, 41; Public Trustee v Loasby (1908) 27 NZLR 801; Re Ninety Mile Beach (1963) NZLR 461).

It was argued by McHugh that Ngati Pikiao had a legal basis for the protection of their fisheries in the Kaituna River and Maketu Estuary. McHugh argued that those customary rights which existed pre-Treaty were not extinguished at the signing of the Treaty of Waitangi. "The Colonial policy of the British Crown included punctilious recognition of the rights of indigenous peoples wherever the British flag was raised. That policy was demonstrated as far back as 1609, and as it was put to (the Waitangi Tribunal):

> ".. the Colonial Office insisted upon and constantly recognised the land rights of native peoples in the Crown's colonies although it was not until the late nineteenth century that any substantial body of English case law began to develop on the matter..." (Wai. 4, para. 5.6.1-2)

It is argued therefore, that after the Treaty of Waitangi was signed, attempts were made in statutes to recognise the existence of customary Maori values through the exercise of customary law [see P.G McHugh's "Aboriginal Title in New Zealands Courts" (1984) Canta. LR]. However following from the decision of Wi Parata, Maori values could not be considered unless specifically directed in legislation [see also McHugh (1984) "The Legal Status Of Maori Fishing Rights in Tidal Waters" V.U.L.R. 14 p.247-273].

4.4.3 The Treaty of Waitangi Act: Waitangi Tribunal

When the Waitangi Tribunal was formed by the above Act, it provided for the first time a legal forum to consider grievances arising under the Treaty. The object of the Act as stated in the long title is "to provide for the observance and confirmation of the principles of the Treaty of Waitangi" which it proceeds to do "... by establishing a Tribunal to make recommendations on claims relating to the practical application of the Treaty, and to determine whether certain matters are inconsistent with the principles of the Treaty". The functions of the Waitangi Tribunal are to inquire into and make recommendations on any claims submitted to the Tribunal under S.6 of the said Act, and report on any proposed legislation referred to the Tribunal under S.8 (s.5) (New Zealand Maori Council v Attorney General NZLR 1987 1 p.641-769). Under S.6 any Maori may submit a claim to the Tribunal if he or she is likely to be prejudicially affected by any such legislation, policy or practice, or act done, or omitted by, or on behalf of the Crown which was or is inconsistent with the principles of the Treaty.

When the Act was first bought in, claims were restricted to legislation, practices or policies by or on behalf of the Crown from the commencement of the 1975 Act. It should be noted that of the five claims which have had findings published before 1986 (Orakei, Manukau, Te Atiawa, Kaituna and Te Reo), three of them dealt specifically with water resource use. The claims candidly revealed the lack of understanding or even awareness of Maori values in water resource management planning. On January 6 1985, the Act was amended to include past

legislation, policies and practices back to 6 February 1840. The Tribunal is presently faced with over 140 claims which may take well into the 21st century to clear (Booth, 1988).

What is of vital importance is that the Treaty of Waitangi now has been given, through the Act, legal status and is no longer considered "a simple nullity" (Wi Parata v Bishop of Wellington. This was tested in 1987 when it was proposed that 10 million hectares of land owned by the Crown would pass to the various State owned enterprises established under the State Owned Enterprises Act 1986 (S.O.E) [see New Zealand Maori Council v Attorney General (1987) NZLR 1 p. 641]. The New Zealand Maori Council applied under Part I of the Judicature Amendment Act 1972 for a review of the proposed statutory power to transfer all or any Crown land to a State enterprise. It was claimed that while S.9 of the State Owned Enterprises Act declared that "nothing in the Act shall permit the Crown to act inconsistently with the principles of the Treaty of Waitangi" (and which could effectively over-ride the rest of the Act), S.27 was inconsistent with those principles in that the Act allowed for the transfer of all Crown land on or before 18 December 1986 which was not involved in, or subject to, a claim before the Waitangi Tribunal.

As a result of the afore mentioned case, "... the transfer of assets to State enterprises without establishing any system to consider in relation to particular assets or particular categories of assets, or whether such a transfer would be inconsistent with the principles of the Treaty of Waitangi would be unlawful" (p.666 line 25). In relation to the Treaty of Waitangi Judge Cooke stated that;

> "... the Treaty is a document relating to fundamental rights; that it should be interpreted widely and effectively and as a living instrument taking account of subsequent developments of international human rights norms; and that the Court will not ascribe to Parliament an intention to permit conduct inconsistent with the principles of the Treaty."

Moreover, through the enactment of the Treaty of Waitangi Act 1975, the government has assumed responsibility for ensuring that the principles of the Treaty are present in legislation. The government has moved from being 'monocultural' (as by representing only the dominant culture's interests), to a position of biculturalism. That position is backed by current movements in the law courts. With such principles emerging it would be pertinent therefore, to examine the present water and soil legislation in the light of the guardianship role the Crown has assumed

4.4.4 Water and Soil Conservation Act 1967

Despite New Zealands' water and soil legislation being accused of being in part monocultural (Minhinnick v Auckland Regional Water Board and Waikato Valley Authority 1982; The Press 16/4/88) and not in keeping with the principles of the Treaty of Waitangi the Act still remains in force (although this is currently under review along with those environmental statutes concerned with land, minerals and air by the Ministry for the Environment, Resource Management Law Reform). The long title of the Water and Soil Conservation Act 1967 outlines the philosophy adopted for the use of water (see Chapter Three). In neither the title nor elsewhere in the Act is recognition given specifically to Maori values. They are, by assumption, part of the public interest, and therefore have no special standing. Any case for their protection, therefore, must be claimed under a general criterion. More specifically, S.21 (3) of the Act specifies that one of the functions of natural water is for the carriageway of wastes. Furthermore, it acknowledges the right of regional authorities to use waterways for the emergency discharge of effluent should sewage treatment fail (Shearer, 1986).

In June 1987, Judge Chilwell in Huakina Development Trust v Waikato Valley Authority and Bowater M430/86 ruled that, given the principles laid out in the Treaty of Waitangi Act, a planning tribunal did not take adequate account of Maori spiritual and cultural values in

determining water rights under the Water and Soil Conservation Act . The Court found that in bringing meaning to a particular Act of Parliament, interpretation may be assisted by reference to other Acts. Accordingly, several Acts may be held to form a comprehensive statutory scheme, especially when "expressly" linked (p.51).

In Huakina three Acts were used to determine whether Maori spiritual and cultural values were recognised: the Water and Soil Conservation Act 1967, the Town and Country Planning Act 1977 (TCPA) and the Treaty of Waitangi Act 1975. The Water and Soil Conservation Act is linked to the TCPA by S.4 of the latter. The TCPA, both specifically and generally gives recognition to Maori concerns in S.3(1)(g). The Treaty of Waitangi Act can be linked to the others through the Interpretation Act 1924, which states that the preamble of all Acts may be used as aids for interpretation.

Thus it was found that the Water and Soil Conservation Act

> "... is not necessarily confined to physical characteristics, just as other aspects of the long title refer to aesthetic considerations which are not necessarily confined to metaphysical considerations. Moreover, the Act is for the 'promoting and controlling multiple uses of natural water.' Thus, it is legitimate to take account of metaphysical considerations. Water may be simultaneously used for physical and metaphysical purposes." (p.59)

4.5 CONCLUDING REMARKS

While it has been shown that Maori values are now cognisable in law, problems are still apparent. In accepting Maori values, the Courts still maintain that the objector must be prejudiced in some way. In a warning, Judge Turner in Re The Bed of The Wanganui [1962] NZAR 600 found that there must exist "...a proper distinction between practical realism and mere symbolism".

Having established that Maori spiritual and cultural values have a legitimate place in New Zealands statutes through the Treaty of Waitangi it becomes an argument therefore as to what extent the current system of water resource management must adapt or change to include those values.

While Chapter Three outlined the dominant cultural perspective of water resource use and how it came to be represented in the engineering profession, Chapter Four explored how that perspective has developed from being monocultural, to that of a system beginning to reflect bicultural interests. This was evident in 1986 when Maori traditional fishing practises came into conflict with European conservation codes. In Te Weehi v Regional Fisheries Officer (1986) 6 NZAR 114 the defendant was charged with removing undersized paua. In his defense Te Weehi maintained he was fishing under customary fishing rights, within traditional grounds and was authorised to do so by the local kaumatua. Although undersized pauas were found in the defendants possession it was maintained that by traditional fishing practise an individual is allowed one flax kit of paua per day. Conflict arose as Te Weehi was charged under European law which stipulates that an individual may not take shellfish under a certain size. In this case Maori lore and European law were operating under similar principles of what could be termed 'fisheries conservation'.

In developing this point further, Chapter Five will will explore how in practical terms the values of both Maori and Pakeha may find expression in the legislative system. In theory those values may be complementary, but in practice, because those principles stem from different world views, conflict often occurs. The purpose of the following chapter will be to show that the resolution of the sewage disposal problem in Rotorua may point the way to bicultural problem solving at a broader level. In contrast to the Kaituna River, the Manukau and Te Atiawa claims will be examined, analysing the possible reasons for those claims remaining as yet, unresolved. Furthermore, movement from a monocultural past to a bicultural present will

be outlined in relation to the Resource Management Law Reform and Local Government Bodies review.

CHAPTER FIVE

TOWARDS A BICULTURAL SOLUTION

5.1 INTRODUCTION

> "What the Pakeha have to appreciate is that Maori grievances will not go away. There is a new generation of Maori knowledgeable in the ways of government and more confident to challenge them. There is a willingness of more senior lawyers to study and to take Maori cases to the courts and the tribunals.
>
> It matters little if only seven percent of Pakeha have read the Treaty (a recent survey figure) or that probably only that proportion of Maori have. New Zealand must come to terms with more than a century of injustices. The dialogue must continue" (Editorial, New Zealand Listener, Oct 15 1988. p.13)

The thesis thus far has outlined the Maori and European perspectives of water resource use and management. It has also been established that past water resource management has been based on those perspectives of the dominant culture, to the exclusion of Maori values. However this cultural dominance within environmental decision making has now given way to a more bicultural approach. This has found expression, not only through case law, but in more recent environmental legislation including the Conservation Act 1986 and the Environment Act 1987. The Crown, in recognising those rights of the Maori as protected under the principles established by the Waitangi Tribunal, has assumed the mantle of guardianship and is henceforth accountable for its actions.

Having determined the Crown's responsibility, it is the intention of this chapter to explore those ways by which government might approach a bicultural environmental management framework, especially with regards to natural water. To achieve this objective, the Kaituna River claim will be discussed in relation to the findings of the Manukau and Te Atiawa claims. While a solution has been found for the sewage problems of Rotorua, the Manukau and Te Atiawa claims as yet, remain unresolved. By drawing such comparisons between the claims, it will be shown that the resolution reached at Kaituna offers a solution which is applicable at a

broader scale.

> "Maori values are not inimical to development ...The Maori is a developer and exploiter of resources ... The Maori world view emphasises the primacy of nature and the need for man to tread carefully when interfering with natural laws and processes. The main problem is not with the traditional religious rules ... but the slight given to the mana or status of the people who hold to those rules." (Wai. 8, para. 9.3.5. p. 124)

5.2 THE CLAIMS - A NEED FOR RESOLUTION

In resolving Rotorua City's sewage problem through a land disposal method in keeping with the spiritual and cultural values of the Ngati Pikiao, the outcome meant a bicultural solution to the problem. At first glance the solution seemed sensible, reached because all parties involved were willing to reach a settlement. The claim however, revealed an institutional problem, which though resolved in the case of the Kaituna has not been adequately faced or dealt with in the Manukau and Te Atiawa claims.

The Kaituna River claim was representative of a conflict which arose from competing sectional interests. These interests can be established at a local, regional or national level. While Ngati Pikiao were arguing for a consideration of their traditional values in determining effluent control measures, the Crown, through the Ministry of Works and Development, were presenting a case for sewage disposal based on technical and economic considerations. The Rotorua District Council was then caught in attempting to find a solution beneficial to all while still maintaining water quality standards. The forum which allowed all competing interests to be heard became the Waitangi Tribunal.

> "Our Tribunal sitting afforded a unique opportunity for the various government, local and private enterprises involved, to meet in a relatively informal way to discuss common problems from the perspective of their own responsibilities, and to review future options. It was unique in that the parties were able to review, not an individual development proposal, but the developments as a whole, and thus to seek a broad overview of development in the district" (Wai. 6, p.47)

It became apparent during the Waitangi Tribunal hearings that the Rotorua District Council was financially dependent upon the subsidy it was to receive from the Government regarding the Catchment Control Scheme. That subsidy was, under the provision of the Water and Soil Conservation Act 1967 and the Local Authorities Loans Board Act 1926 controlled by the Ministry of Works and Development, thus the national level interest was established.

The local interest involved those persons or groups immediately affected by the effluent disposal problem. These included not only Ngati Pikiao, but also groups such as the Maketu Action Group (Maketu Estuary residents concerned about the continued despoilation of their resource), and the Guardians of Lake Rotorua (an active group concerned about the loss of water quality in Lake Rotorua). These groups had the power of objection in water right hearings but no direct influence on water resource policy or allocation. At the local level there also exist groups with competing interests. The Lake Rotorua Guardians supported the nutrient pipeline proposal as this would lead to a increase in water quality while the Ngati Pikiao opposed the proposal. Input also occurs at the regional level with actors, in the case of the Kaituna River claim, including the Rotorua District Council, the Bay of Plenty Catchment Commission, and the Regional Water Board. These groups were responsible for effluent treatment, construction, control and management. The Regional Water Board was responsible for the administration of the Water and Soil Conservation Act 1967, while the District Council was concerned with the best possible method of sewage disposal.

At each of the levels of interest (local, regional and national) an actor or group manages and/or is constrained by a particular statute or group of statutes. Each level of interest has a defined set of aims and objectives and with participating authorities devising policy to attain them. The 'national interest' can be used to express a wide variety of ideas. For instance, it can be used to mean " the collective preference of the nations inhabitants for the use of a resource" or "the viewpoint or preference expressed by that peoples representatives" or "the preservation of the system that allows a proper and democratic expression of ones views or preferences". At the other end of the spectrum, the 'local interest', although not quite as

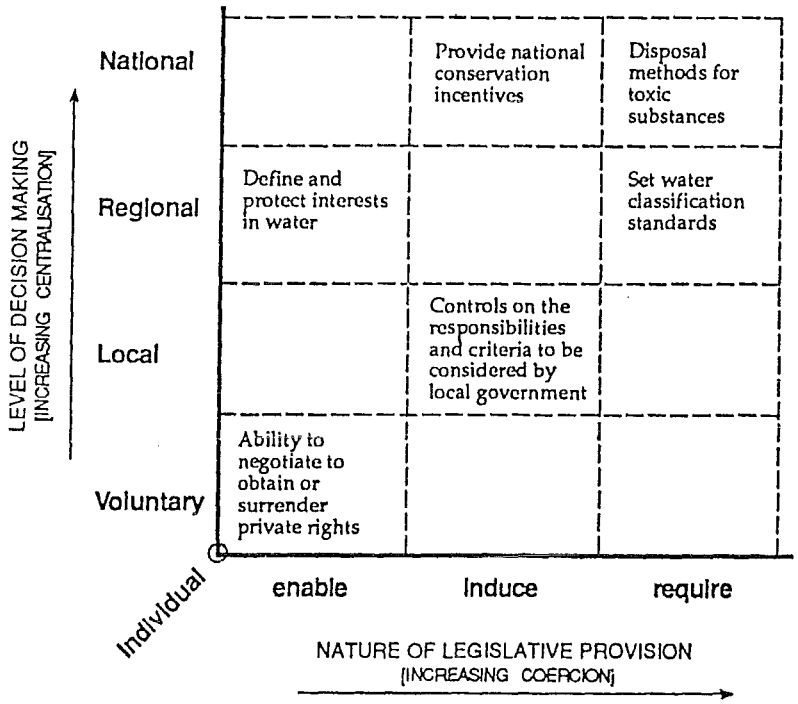
ambiguous or nebulous is open to an equal number of interpretations. It can mean "the collective preference of all the people in the community" or "the preference of all those in the community who are affected by, but not directly involved in, a particular resource management decision". Although the terms are not easily definable they do give an indication as to the extent and territoriality of the different levels of interest (Thornton *et al*, 1988)

Laws are written at the most basic level to enable, allow or prohibit certain activities to occur. Legislation can be categorised into three main areas. Most resource management statutes include a mixture of 'enabling', 'promoting' and 'requiring' depending upon the amount of control and influence government wishes to utilize (Resource Management Law Reform, 1988). Figure 5.1 illustrates that with increasing levels of decision making, a greater degree of coercion occurs. This in effect establishes the right of the Crown to override other levels of interest.

The Kaituna River claim was the result of a conflict occurring because of different interests at the national, regional and local levels. Although models have been devised outlining a framework for this type of conflict (Ciracy Wantrup, 1967; Allison, 1969), it is not the intention of this thesis to explore those underlying theories. Rather, the claim put forward by the Ngati Pikiao has highlighted the type of institutionalised bias and formalised structures which has surrounded water resource management.

Within water resource management and associated statutes lay a hierarchal structure dominated by the Ministry of Works and Development. Through its statutory obligations, the Ministry maintained controlling interests in all forms of water resource use. Hence the involvement in the sewage disposal problems of Rotorua City. In filing the claim before the Waitangi Tribunal, the Ngati Pikiao challenged the standing philosophy of water resource use and management under Crown control. While the wisdom of using natural water for the discharge of wastes was questioned, the claim also challenged the dominance of one particular cultures' use and management of that resource. In reaching a solution to Rotorua's effluent

FIGURE 5.1 RANGE OF OPTIONS FOR LEGISLATION



From Resource Management Law Reform (1988)

disposal problems two points need reiterating.

1. Maori traditional values have legitimate standing in New Zealands water and soil legislation, through the status of the Treaty of Waitangi and by the principles which stem from Maori lore.

2. The institutionalised structures which had been put in place by the water and soil legislation were monocultural and needed to be adjusted in order to reflect attitudes more in tune with a bicultural society.

The argument presented is that because of the hierarchal structures set in place by the dominant culture, what could be termed the 'national interest', would normally prevail over all others. However with the development of bicultural policies, these institutional structures were challenged and as a result, new management frameworks are now being developed (see Resource Management Law Reform, 1988). In the case of the Kaituna River claim, it was the regional level which provided the focus for Rotorua's sewage problem. Rather than local or Ngati Pikiao interests, or that of the national interest under the Ministry of Works and Development holding dominance, the regional level provided the focus to balance those interests.

Pertaining to this regional focus presently being advocated by the Resource Management Law Reform, the role of central government in these issues is also being discussed. It is argued that government has a central role in defining what rights (and duties) people have to resources, and in determining subsequent enforcement those rights. Government may also exert varying degrees of control over the management of resources and similarly it can choose either to administer resources itself, or pass responsibility on to groups or individuals.

In establishing the prerogative of a bicultural national interest, it must therefore be decided at which level the government should be involved. This at present, as advocated by RMLR and the Local Government review, is that competing interests will best be articulated and resolved at a regional level. In developing such a framework it is pertinent therefore to

investigate those reasons for the failure to resolve both the Manukau and Te Atiawa claims.

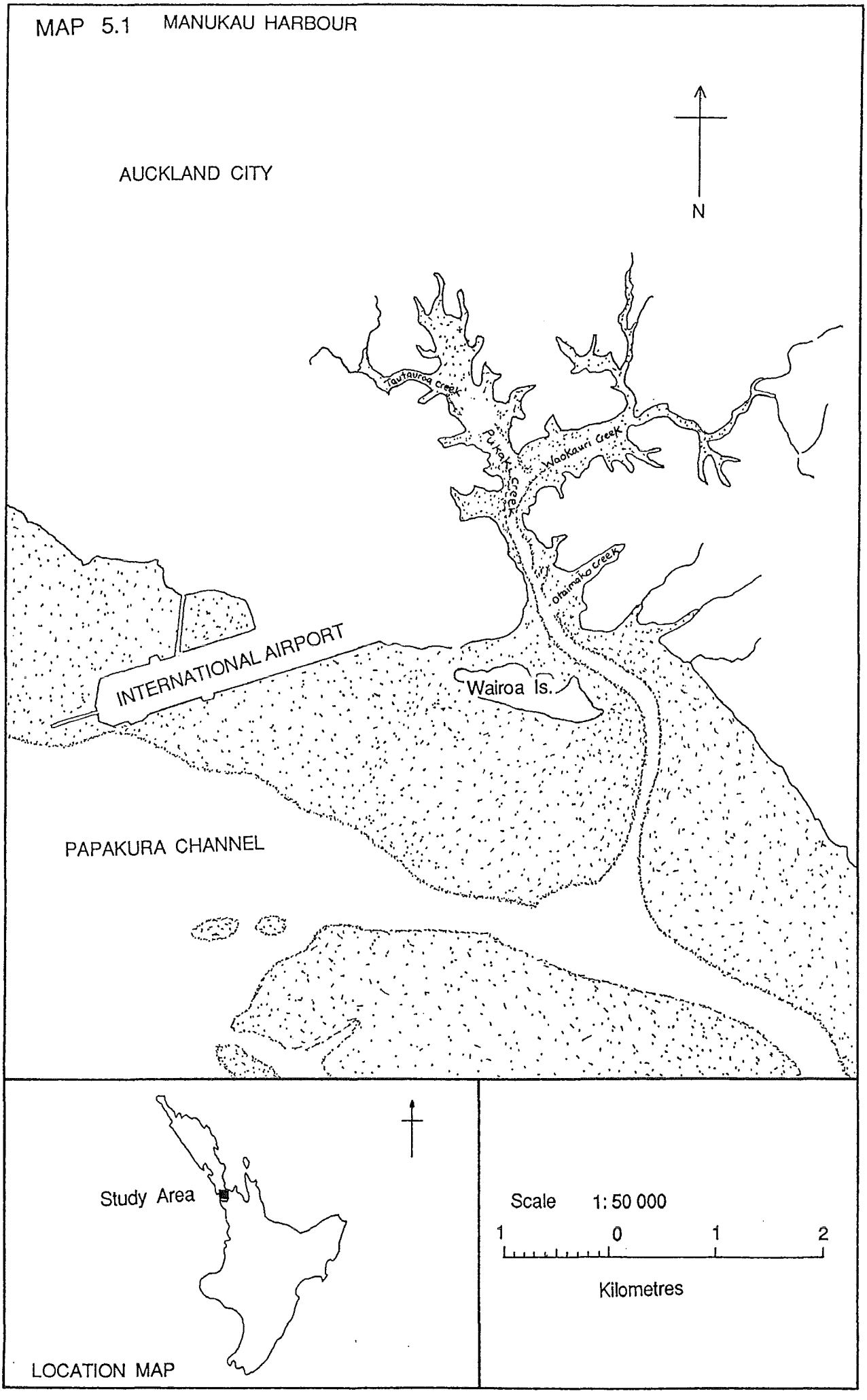
5.3 THE MANUKAU CLAIM (1985)

Up until recently the Manukau claim has been the most wide ranging that the Waitangi Tribunal has had to consider. Claims ranged from an affront to Maori traditional values in the mixing of waters from the Waikato River and the Manukau Harbour, to specific projects such as the mining of ironsands at Maioro and the siting of a liquefied petroleum gas wharf terminal in the Papakura channel (refer Map 5.1)

The Manukau Harbour, once the cultural and spiritual nexus for the Manukau/Tainui Confederation of Tribes, has been relegated to a 'second class backwater' and described as a 'mere geographic convenience' (Shearer, 1987). In the period to 1900 industrial growth centered around the Upper Mangere (an inlet of the Manukau). Trade waste and refuse were discharged directly into the harbour. By the First World War the Upper Mangere became firmly established as the noxious industry centre for Auckland. By 1950 pollution was an obvious problem. Some 18 trade waste sewers discharged into the harbour along its northern shores together with untreated urban effluent and discharge from a meat processing plant. The Mangere inlet has been described as "an evil smelling estuary having a bottom covered with black, sulphide smelling ooze" with rotting organic matter "several feet thick". (Wai. 8, p. 61).

Other areas of the harbour suffered also. The Pukaki and Waiokauri Creeks and related estuaries have all suffered from extensive pollution. In a Report by the Health Department in 1981 relating to an application for an oyster farm in the vicinity, it was stated that:

> "In the past the entire Manukau Harbour was considered unsuitable for this purpose and even although the area was not officially declared as such it was thought that nobody would contemplate (such) a proposal." (*Ibid* p. 57)


MAP 5.1 MANUKAU HARBOUR
AUCKLAND CITY
N
Tautauroa creek
Pukaki Creek
Waokauri Creek
Otaimaiko creek
INTERNATIONAL AIRPORT
Wairoa Is.
PAPAKURA CHANNEL
Study Area
LOCATION MAP
Scale 1: 50 000
1 0 1 2
Kilometres

In the same report, the Health Department found that the Pukaki area had been affected by nine emergency sewer overflow points, leachate from an illegal refuse tip, reclamation and storm water from residential and industrial properties. Other pollutants identified were detergent and aviation fuel from the airport and land wash from a number of dairy farms and market gardens using a wide range of fungicides, pesticides, fertilizers, and weedkillers.(*Ibid*)

During the 1960's the Mangere Sewage Treatment Plant was constructed and controls were placed on the disposal of untreated wastes. The 1970's saw a shift from using engineering solutions to resolve the pollution problem exhibited in the Manukau, to the imposition of environmental policies and controls:

- the Clean Air Act 1972
- the appointment of the Auckland Regional Authority to implement water control policies
- the implementation of environmental protection and enhancement procedures for new industries and developments in 1973
- the Marine Pollution Act 1974 to control unauthorised dumping of waste
- the introduction of District Schemes under The Town and Country Planning Act 1977 to control the urban and industrial spread to rural environments
- the publication of a Manukau Harbour Plan
- the establishment of a Manukau Harbour Planning Authority, and
- an extension of the Auckland Regional Authorities (A.R.A.) planning boundaries to include the harbour.

In its recommendations regarding the Manukau claim, the Waitangi Tribunal found that the present laws regarding the ownership and control of rivers, harbours, coastal and foreshore areas failed to adequately take into account not only Maori concerns but those of other sectional interests. The Tribunal suggested that the problem might be overcome if 'existing anomalies' be rationalised and therefore provide integration with other planning statutes:

> ". . . that in view of Maori sensibilities to the ownership of river, coastal and foreshore areas and the need to reconcile those sensibilities with public ownership,
>
> and in view of the diversity and occasional anomalies in the laws and practises governing grants of control of various parts of those areas, and the need to integrate those controls with sound planning principles in both environmental and commercial management,
>
> the laws relating to the ownership and control of rivers, harbours, coastal and foreshore areas be reviewed with the particular enactments in force for particular harbour, coastal and foreshore areas with a view to restoring the ownership of the Crown and expressing therein the Crown's functionary responsibilities to the local tribes in terms of the Treaty of Waitangi, and with a view to rationalising existing control anomalies and providing integration with other planning statutes." (refer para 6.1, 6.4, 6.5, 8.3, 9.2.3. and 9.2.4.) [Wai. 8, p.129]

Currently more than 20 different authorities have jurisdiction over different parts and aspects of the Manukau, each operating form a variety of legislative directives. It is argued by the tangata whenua that there exists no comprehensive framework to manage the harbour as an ecological entity. Furthermore, it is contended that to continue with the present fragmented approach, the solutions reached will be equally fragmented and piecemeal.

> "Unlike these authorities the tangata whenua view the Manukau in a holistic manner, as a complete interdependent system. It is recognised for instance, that the streams and creeks provide food for aquatic life within the harbour and that these streams depend upon the quality of the run-off on the land. Together these various components are perceived by the tangata whenua to form a complete whole and were traditionally managed in this way. The concept of 'ecology' has always been an inherent part of tangata whenua belief." (Shearer, 1987)

An equitable solution regarding the overall management of Manukau Harbour and its environs has not been reached to date. Although dialogue and consultation between the tangata whenua and harbour authorities continues (Shearer, 1987; Campbell and Matunga, 1988), the institutional structures presently in place have a tendency to prevent any imaginative solution to an ongoing problem. Like the Kaituna River, there is more than one problem to solve, more than one Maori tribe to consider. This has important ramifications for future conflict management and resolution. Furthermore, notwithstanding Maori concerns, Pakeha interests

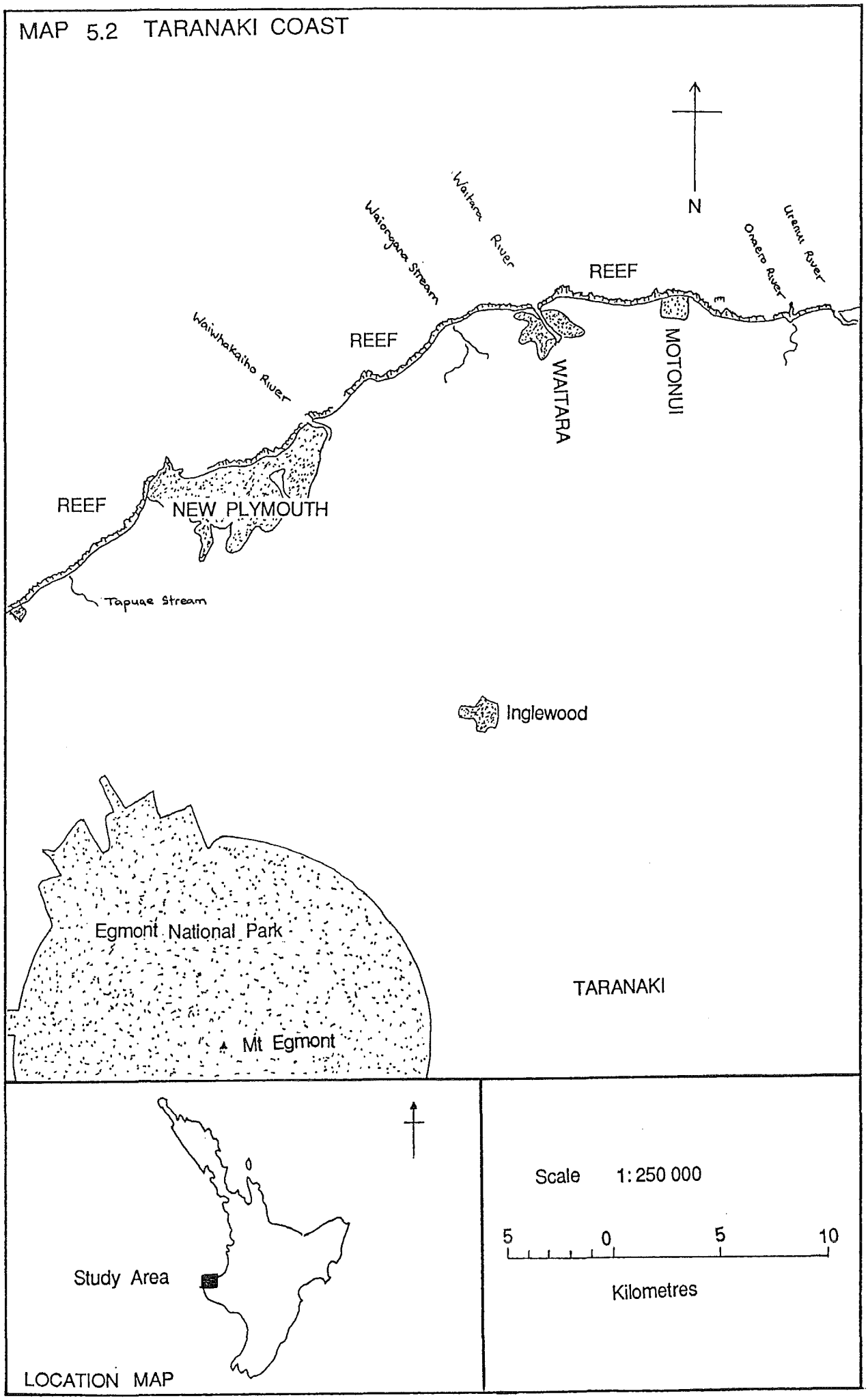
must also be balanced. In reaching a solution, a more holistic framework than what exists at present will be required that focuses on environmental concerns rather than sectional interests.

> "We consider that Maori values ought to be provided for in planning legislation. We do not think they should predominate over other values but we do think they should be bought into account and given proper consideration when Maori interests are particularly affected." (Wai. 8, p.124)

It can be seen therefore that the solution proposed by the Maori in terms of incorporating a more holistic, ecological approach into harbour management, has much merit. In contrast, the present problems are the result of ad hoc, fragmented management plans. Through the incorporation of Maori values, the fragmentation of responsibility evident may be resolved. Henceforth both Maori and Pakeha interests would be best enunciated at the regional level. With this in mind, the following section will outline the institutional problems which instigated the Atiawa claim and why after five years since the Waitangi Tribunal report, no successful resolution of that conflict has been reached (Dominion Sunday Times, 24/1/88).

5.4 TE ATIAWA CLAIM (1983)

On June 2 1981 Aila Taylor on behalf of the Atiawa Tribe filed a claim before the Waitangi Tribunal concerning the failure by or on behalf of the Crown to properly control discharge of sewage and industrial waste into the sea between New Plymouth and Waitara (refer Map 5.2). It was argued that the discharges adversely affected Te Atiawa fishing grounds through continued pollution and were causing irreversible damage to a larger area of sea bed which the Tribe relied on as a source of food. As a consequence, this deprived Te Atiawa of the 'full exclusive and undisturbed possession' of fisheries which it desired to retain thereby causing a policy or practice by or on behalf of the Crown to be contrary to the principles of the Treaty of Waitangi (Wai.6 Appendix I). As well as unsatisfactory pollution controls, Te Atiawa claimed that their fishing grounds would be further destroyed if the building of a second ocean outfall at Motonui by the New Zealand Synthetic Fuels Corporation (Syngas) Methanol Plant under the National Development Act 1979 was to go ahead.


MAP 5.2 TARANAKI COAST
N
Waiongana Stream
Waitara River
REEF
Onaero River
Urenui River
Waiwhakaiho River
REEF
WAITARA
MOTONUI
REEF
NEW PLYMOUTH
Tapuae Stream
Inglewood
Egmont National Park
Mt Egmont
TARANAKI
Study Area
LOCATION MAP
Scale 1:250 000
5 0 5 10
Kilometres

The parallels between Te Atiawa and that of the Kaituna River claim are quite striking. Like the Ngati Pikiao, Te Atiawa urged for the provision of land based treatment plants rather than water based disposal methods. (*Ibid* p.66). However in February 1981 Syngas applied for a water right to discharge industrial waste into the sea through an independent ocean outfall adjacent to its plant at Motonui. The hearing before the Planning Tribunal under the National Development Act recommended that the water right sought be granted subject to conditions. Again through the Water and Soil Conservation Act 1967 the discharge of effluent into the sea was permissible given a series of criteria and guidelines (*Ibid* p.31)

The Waitangi Tribunal reported, as in the Kaituna River claim, that the Water and Soil Conservation Act held no special provisions for Maori traditional fishing grounds and that Maori interests were merely one aspect of the general public interest. In the provisions for the granting of water rights it was found that the Act did not clearly spell out the broad principles that Regional Water Boards had to perform or the extent to which any special interests should be protected.

> "What the Act instead provides for is the classification of regional waters to provide a broad blueprint against which Regional Water Boards are required to discharge their responsibilities in granting water rights. It is this provision which provides the essential planning and control mechanisms against which Regional Water Boards (and the Planning Tribunal) are able to measure individual applications. It provides the minimum standards of quality at which classified areas of natural water shall be maintained" (*Ibid* p.38)

In effect a Regional Water Board, through water rights decides not what the maximum water quality standard is to be but that of the minimum which is to be maintained.

As in the Kaituna River claim, the system of water classification became a major issue and was criticised by the Waitangi Tribunal. In the Atiawa claim the Tribunal stated that

> "The system whereby the Water Resources Council classifies water was 'fraught with difficulties and at the moment seldom

> used' and that it was not the current policy of the Water Resources Council to invoke the powers that it has" (*Ibid* p.39).

It was demonstrated during the hearing that local and regional concerns had no real legislative power in the face of a stated national interest such as the Syngas Methanol Plant. The claim involved pollution from a number of sources but it was the proposed ocean outfall from Syngas at Motonui which proved to be the most contentious. In its findings, the Waitangi Tribunal recommended that the outfall should not be proceeded with and other options reviewed.

The National Government under the Muldoon administration initiated a series of 'Think Big' Projects through the National Development Act - the Syngas Plant at Motonui being one such project and the New Zealand Steel Plant at Manukau being another. As there were problems with the existing outfall at Waitara [refer Map 5.2] (*Ibid* p.50) and hence a possibility that the Syngas project might be jeopardised by unforeseen technical difficulties, the Crown (through the Minister of Energy) thought it more prudent to construct a separate ocean outfall. As a result the government rejected the recommendations of the Waitangi Tribunal and opted instead to proceed with the planning and construction of an outfall at Motonui. It became a case of whose was the 'best interest' being served - national, regional or local. However, due to an unprecedented public reaction as the recommendation of the Waitangi Tribunal were to be ignored, the government was forced to reconsider its position. It then chose to form a task force to re-examine the recommendations of the Tribunal.

The Atiawa claim exemplifies those sectional interests which dominated water resource management. There existed a strong local objection to the continued pollution of the fishing reefs. Submissions to the Tribunal in support of the Atiawa claim were made from both Maori and European alike:

Taranaki Clean Sea Action Group Inc.,

the Taranaki Branch of the Soil Association of New Zealand,

the Taranaki Branch of the Values Party,

the Waitara Surf Riders Club, and individual members of the public. Again, similar to the Kaituna River claim, little could be done at the local level apart from continued objections in planning tribunals and water right hearings.

The Crown, through the National Development Act had a vested interest in the Taranaki region. The two themes which reoccur throughout all three of the water resource claims heard before the Waitangi Tribunal is that water firstly may be used for the carriageway of wastes and secondly that a structured hierarchy of interests existed with the Crown ultimately determining what is in the 'best interest'. The Waitangi Tribunal found that when a national interest was determined there was scant regard for regional and local concerns:

> "(d) That there are insufficient planning requirements to provide an adequate assurance that the river (Waitara) and reefs will not be further polluted as a result of further development and growth in the area and that in any event insufficient recognition is given to the Maori interest in the coastal and inland waters to ensure the protection of that interest in existing mechanisms for planning and control and in legislation governing the use of the seafood resource" (*Ibid* p.5)

It can be seen that both the Manukau and Te Atiawa claims arose because not only had central government failed to recognise Maori values, but the stated 'national interest' accounted for only those interests of the dominant culture. However what should be noticed in both claims is that while a solution was reached at the regional level in the Kaituna River claim, it has been shown that the legislative power of regional authorities is relatively weak. With this in mind the following section will explore how bicultural concerns might be incorporated into the present water resource decision making process.

5.5 A SOLUTION AT THE REGIONAL LEVEL

The basis for reconciling the national, regional and local tiers of interest lies in the principles embodied in the Treaty of Waitangi. As discussed in New Zealand Maori Council v Attorney General (1987):

> "... the Treaty of Waitangi must be viewed as a solemn compact between two identified parties, the Crown and the Maori, through which the colonisation of New Zealand was to become possible. For its part the Crown sought legitimacy from the indigenous people for its acquisition of sovereignty and in return it gave guarantees. That basis for the compact requires each party to act reasonably and in good faith towards each other" (Judge Richardson, p.673)

The problem which occured in the Manukau, Te Atiawa and Kaituna claims was that the institutional structures set in place through various statutes, maintained only the dominant culture's right in resource use and allocation. As a result the question of resource ownership as determined by the Treaty of Waitangi has been discussed in recent Resource Management Law Reform (R.M.L.R) huis around the country (personal communication with Gray, 1988). It is argued that the Treaty as being separate from legislation, can be used to determine both Maori and Pakeha accountability. The Maori may claim rights through being tangata whenua and likewise the Pakeha may claim rights through being tangata tiriti (rights of occupation stemming from the Treaty).

Article One, in allowing Pakeha the right to form a system of government, ensured that through Article Two, Maori rights were to be protected thereby passing the responsibility of the protection to the Pakeha. Article Three, in granting the rights and privileges of British citizenship to the Maori in return made them equally responsible to the principles of the Treaty. This in effect created a system of shared responsibility and accountability. Discussion has centred around the concept of joint control and management (see R.M.L.R Discussion Paper One, 1988). However debate continues regarding the degrees of representation either Maori or Pakeha will have in determining natural resource management and use.

The claims heard before the Waitangi Tribunal highlighted the inadequacies of a constitutional system which through a historical legacy predisposes one cultural perspective over another. One appropriate solution may be reached by using what is known as a constitutional/ political framework (Thornton *et al*, 1988). The problem can be determined as 'who holds the power to influence resource decisions through statutory regulations', or more

specifically, 'who determines the distribution of control over resource use':

> "The problem is essentially that of being concerned with the participatory process by which resource use decisions are made. Good solutions can be distinguished from poor solutions not so much by the particular resource use decision that might result, but rather by the extent to which the process through which a decision is reached is considered to be fair, equitable and culturally appropriate" (Thornton et al, 1988)

In defining the political/ constitutional perspective there is an explicit need to determine what is 'fair and equitable'. Statutes, common law and theories of justice are generally concerned with the reconciliation of those interests - the water and soil legislation being one such statute. However, in attempting to reconcile those levels of interest, the legislation up until recently has tended to include only those interests which have been defined by the dominant culture. Thornton *et al* (1988) identify five points which are considered important:

1. It is legitimate, at least in some cases, for the national interest to have precedence.
2. The principles embodied in the Treaty of Waitangi should be adhered to.
3. The values of all individuals and groups placed on the quality of the environment should be given full and balanced consideration.
4. Individual freedoms should be respected.
5. Lack of income or wealth should not be allowed to adversely prejudice the rights of individuals or interest groups to be heard.

The three claims presented to the Waitangi Tribunal concerning water resource use occurred because what in each case had been determined as the national interest, conflicted with that of an identified local interest. In the Manukau claim for example, it was evident that effective management was considerably hindered by too many statutory regulations and authorities with overlapping responsibilities. The solution therefore may lie in the conflict being resolved at a regional level with overall responsibility remaining with the Crown given its stated bicultural intentions.

It is the submission of this thesis that the success of the Kaituna River claim was in part a result of the problem being articulated and resolved at a regional level. The over-riding influence of the Ministry of Works and Development and statutory obligations had hindered what was in the end, a sensible decision on effluent treatment and disposal. The Atiawa and Manukau claims although more complex, also involved decisions being made on the national, regional and local levels. The Waitangi Tribunal found that when a stated national interest was in conflict with regional objectives, executive responsibility tended to remain with the Crown.

In the case of Te Atiawa, planning requirements at the regional level as a result were insufficient to ensure an adequate resolution of the continued pollution of the Maori fishing beds. This lack of statutory power for regional authorities is an issue currently being discussed in the R.M.L.R and Local Government Bodies review. It is envisioned that regional authorities will have a pivotal role in resource planning and regulation, adjudicating between local and national interests (R.M.L.R, 1988).

The main point to consider in deciding upon an appropriate framework from which water resource management decisions can be made, is the way in which Maoridom might have access, and equally contribute to, the structures through which decisions are made. This can be achieved through consultation at the Runanga or Trust Board level as these institutions equate with the Pakeha system of regional authorities. By adopting a framework which gives greater accountability, iwi authorities could have an equal standing with that of regional authorities thereby ensuring the principles of the Treaty of Waitangi are upheld.

5.6 CONCLUDING REMARKS

The Treaty of Waitangi has major implications for the exercise of powers of government and property rights over natural and physical resources. Most of the issues arising in respect of these resources result from the interplay between Article I of the Treaty which establishes the right of the Crown to govern and Article II which sets out the rights of the Maori owners. With goodwill on both sides, it should be possible to give a fair weighting to both of these

Articles so as to balance the reasonable interests of both partners.

The three claims, Kaituna, Te Atiawa and Manukau have all demonstrated that Maori traditional values have a legitimate place in water resource management. In resolving the conflicts which occur in those areas where Maori traditional values have been established, there are a number of options which can be pursued. It is therefore necessary to determine at an early stage whether the issue(s) involved would be at a national, regional or local level. In determining this, points of contact can then be established.

As previously suggested, iwi authorities, through tribal runangas (committees) and Trust Boards could be used as authorities which might ideally identify and amalgamate local and regional Maori concerns. They may then legitimately negotiate with Central Government on those issues which involve a 'national interest'. In doing so the focus becomes regionalised; local concerns may receive more attention than they do at present (refer Wai. 6, p.21). The important point to note is that Maori concerns have legitimacy.

In advocating a regional level of decision making and responsibility, points of contact between competing interests can be more readily established. Each whanau, hapu and iwi have to an extent a slightly different perceptions of resources in their particular territory, and hence place different values on them. For Ngati Pikiao, the Kaituna River provides a central focus for the tribes' mana and rangatiratanga, while for the Manukau/ Tainui people it is the harbour and associated kaimoana which gives them their mana and standing. Each tribe and associated geographical area has different concerns which may not always be met in determination of a national interest. Therefore in enabling those Maori values, it should be recognised that the present institutional structures may in some cases be inadequate and hence reform of the participatory decision making process necessary.

In developing a resource strategy, competing interests must be accounted for. At a national scale, there exist three levels - national, regional and local. Into this framework Maori values

must be accounted for. In the past the national interest, as represented by government, has recognised only those values of the dominant culture, to the exclusion of Maori. This chapter has demonstrated that it is the regional level which offers the most appropriate arena to articulate those competing interests. By doing so it can be seen that the Crown, through the adoption of a bicultural approach have shown that Maori traditional values are complementary to those of the Pakeha, especially with regards to water resource.

CHAPTER SIX

CONCLUSION

This thesis maintains that while there is urgent need to take into account and recognise Maori spiritual and cultural values in the management of natural resources, this must proceed from an understanding of the underlying philosophy of the dominant culture. The Kaituna River claim reflected an institutional bias prevalent, up until recently, in the Water and Soil Conservation legislation. This thesis has traced the developments of water resource management showing that far from being incompatible, Maori and Pakeha values can co-exist, which in the case of Rotorua, provided an approach to sewage disposal that was environmentally appropriate.

It is the objective of this chapter firstly to summarise the argument that water resource use in the past, has been culturally determined in that traditional Maori values were not adequately recognised in legislation, and secondly, to show that Maori traditional values have legitimacy and are now being protected by the Crown through the Treaty of Waitangi. The third objective relates to showing the need for bicultural research in this area. This cannot be equated with being solely a Maori or Pakeha problem. It requires dialogue and understanding of both cultures. Moreover, it is argued that in adopting a bicultural framework for water resource management, ecologically desirable solutions may eventuate.

6.1 SUMMARY

The Kaituna River claim provided an insight into how one option for the disposal of sewage was in effect predetermined by a range of institutional structures set in place by the empowering legislation. The Waitangi Tribunal thus provided the forum which allowed Maori values equality with those of the dominant culture. It was found by the Tribunal that the discharge of Rotorua City's sewage via the proposed nutrient pipeline from Lake Rotorua to the Kaituna River was in direct contravention to the spiritual and cultural rights of the Ngati Pikiao. It was claimed by Ngati Pikiao that the discharge of sewage into the River would result

in the inability of the tribe to utilise the resources of the Kaituna and Maketu Estuary through the imposition of tapu. Having established the Maori context, the Tribunal went on to explore the reasons behind the decision to proceed with the pipeline.

The claim was brought before the Tribunal under the Treaty of Waitangi Act 1975 which allowed any Maori or group of Maoris to submit a claim which occured as the result of a policy or practice by or on behalf of the Crown; that being in this case, a policy and practice adopted by the Ministry of Works and Development. It was found that options other than the nutrient pipeline had not been adequately explored and that the proposal was in effect due to a 'departmental insistence' by the Ministry. The conclusion reached by the Tribunal was that the solution to Rotorua's effluent disposal problems was in hindsight "the result coming from the mind of an engineer..."

The case study of the Kaituna River claim highlighted an institutional problem through the example of a proposed sewage disposal method. Chapter Three went on to explore further how the engineering profession came to be involved in water resource management at a general level. The argument developed was that the dominant culture's use of natural water stemmed from a scientific, technological perspective which found expression through land rights, a market orientated economic system, and eventually into the legislative system.

The early water and soil legislation (Soil Conservation and Rivers Control Act, 1941) reflected the objective of that economic system with the need seen to increase primary production (which would in turn stimulate economic prosperity) with the most appropriate exponents being the engineers. This dominance of the engineer in water resource management was further enhanced in the Water and Soil Conservation Act 1967. Unlike the 1941 Act, the 1967 Act was concerned with the balancing of competing uses through the principle of 'multiple use' rather than forcing structural changes of a water course in order to promote soil conservation.

Again it was the same engineers which determined those uses, one being that natural water could be used for the carriageway of wastes. It was therefore established that the engineering profession through the Ministry of Works in effect controlled water resource use. It was that philosophy held by the Ministry, which supposedly represented the common public good, that stimulated the claim by Ngati Pikiao. It was argued that the prevailing philosophy of water resource did not adequately take into acount Maori spiritual and cultural values.

Having established the cultural dominance of water resource use and how it emerged, Chapter Four then demonstrated that Maori values, through the Treaty of Waitangi, had legitimacy. A Maori world view regarding resource management was briefly discussed in order to provide a background for the argument that Maori traditional values are complementary rather than being dissimilar to those perspectives of the dominant culture. Following from this, together with recent developments in case law, the curent status of the Treaty of Waitangi was outlined further highlighting the need to incorporate a bicultural approach into water resource management.

In determining not only the legitimacy but also the complementarity of Maori spiritual, cultural and traditional values, it remained to outline a possible framework from which a bicultural aproach to environmental resource management might be developed. The Kaituna River claim was presented as a worked example by which a solution was reached. This was then compared to the Manukau and Te Atiawa claims in order to determine why solutions for those claims had, as yet, not been achieved.

6.2 CONCLUDING REMARKS

The solution presented was that a regional level provided the most appropriate arena to articultate and resolve resource management problems. This approach is very much in line with the present options for restructuring environmental legislation as outlined by Resource Management Law Reform (Ministry for the Environment), and the Local Government review. While this thesis has showed how the problem relating to one use of natural water was solved

at a regional level there remains a recognised need for greater interactive research which develops a framework for bicultural approachs to resource management decision making.

It has been argued by Murton (1987) that bicultural research is often beset with difficulties. The issues to be settled stem from two world views, involving separate ways of defining and hence solving a problem. Moreover, analysis of the cultural relationship between Maori and Pakeha must come to terms with the conflict over resource allocation, use, and the historical grievances of the Maori. More importantly, current moves by government have shown that Maori spiritual and cultural values have legitimacy and are important considerations when devising resource management policy.

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GLOSSARY *

ahi ka	lighting of fire - refers to rights of occupation
Aotearoa	Land of the Long White Cloud (New Zealand)
atua	god
hapu	sub tribe
hinengaro	thoughts and emotions
hui	gathering of people
ihi	power, authority, essential force
Io Korekore	supreme being creator
iwi	tribe
kaitiakitanga	guardians
kaumatua	male elder
kiekie	*Freycinetia banksii* , a climbing plant
kotiate	similiar to a mere but of hardwood
maihi	ornamental interior walls
Maoritanga	Maori culture
mauri	life principle, force or essence
mana	divine power for leadership, prestiage
marae	a gathering place; the physical dimension of a group's identity
mere	a short flat weapon of stone
mokopuna	grandchildren
noa	ordinary
oriori	chant
Papatuanuku	earth mother
pepeha	motto maxim
pokeka	chant
rahui	temporary state of tapu
Ranganui-e-tu-nui	sky father
rangatira	chief
rangatiratanga	well born, noble
taiaha	a weapon of hardwood carved in the shape of a tongue with a face on each side and adorned with a fillet of hair or feathers
tangata whenua	people of the land, original inhabitants
tangata tiriti	people of the Treaty - Pakeha rights of occupation as established by the Treaty of Waitangi
taniwha	guardian spirit (usually of a water body)
tapu	sacred forbidden

tohunga	priest or anointed one
tukutuku	ornament flax panals
waiata	song of lament
wairua	spirit
wehi	afraid, fear
whakapapa	geneology
whanau	family
urupa	burial place

* Many of the English equivalents do not accurately translate the true meanings of those terms used.

appendices

[SCHEDULES

Section 26(

[FIRST SCHEDULE

STANDARDS FOR CLASS A WATERS

The waters shall in all respects be maintained in their natural state, and no waste shall be permitted to enter them.

[SECOND SCHEDULE

STANDARDS FOR CLASS B WATERS

The quality of Class B waters shall conform to the following requirements:

(a) The natural water temperature shall not be changed by more than 3 decress Celsius:

(b) The acidity or alkalinity of the waters as measured by the pH shall be within the range of 6.0 to 8.5 except when due to natural causes:

(c) The waters shall not be tained so as to make them unpalatable nor contain toxic substances to the extent that they are unsafe for consumption by humans or farm animals, nor shall they emit objectionable odours:

(d) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances:

(e) The natural colour and clarity of the waters shall not be changed to a conspicuous extent:

(f) The oxygen content in solution in the waters shall not be reduced below 6 milligrams per litre:

(g) Based on not fewer than 5 samples taken over not more than a 30-day period, the median value of the faecal coliform bacteria content of the waters shall not exceed 2,000 per 100 millilitres and the median value of the total coliform bacteria content of waters shall not exceed 10,000 per 100 millilitres.

(h) *Repealed by s. 30(a), 1973 No. 24.*

[THIRD SCHEDULE

STANDARDS FOR CLASS C WATERS

The quality of Class C waters shall conform to the following requirements:

(a) The natural water temperature shall not be changed by more than 3 decress Celsius:

(b) The acidity or alkalinity of the waters as measured by the pH shall be within the range of 6.5 to 8.3 except when due to natural causes:

(c) The waters shall not be tained so as to make them unpalatable nor contain toxic substances to the extent that they are unsafe for consumption by humans or farm animals, nor shall they emit objectionable odours:

(d) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances:

(e) The natural colour and clarity of the waters shall not be changed to a conspicuous extent:

(f) The oxygen content in solution in the waters shall not be reduced below 6 milligrams per litre:

(g) Based on not fewer than 5 samples taken over not more than a 30-day period, the median value of the faecal coliform bacteria content of the waters shall not exceed 2,000 per 100 millilitres and the median value of the total coliform bacteria content of waters shall not exceed 10,000 per 100 millilitres.

(h) *Repealed by s. 30(b), 1973 No. 24.*

[FOURTH SCHEDULE

STANDARDS FOR CLASS D WATERS

The quality of Class D waters shall conform to the following requirements:

(a) The natural water temperature shall not be changed by more than 3 decress Celsius:

(b) The acidity or alkalinity of the waters as measured by the pH shall be within the range of 6.0 to 9.0 except when due to natural causes:

(c) The waters shall not be tained so as to make them unpalatable nor contain toxic substances to the extent that they are unsafe for consumption by farm animals, nor shall they emit objectionable odours:

(d) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances:

(e) The natural colour and clarity of the waters shall not be changed to a conspicuous extent:

(f) The oxygen content in solution in the waters shall not be reduced below 5 milligrams per litre:

(g) *Repealed by s. 30(c), 1973 No. 24.*

[FIFTH SCHEDULE

STANDARDS FOR CLASS SA WATERS

The quality of Class SA waters shall conform to the following requirements:
(a) The natural water temperature shall not be changed by more than 3 decress Celsius:
(b) The natural pH of the waters shall not be changed by more than 0.1 unit and at no time shall be less then 6.7 or greater than 8.5:
(c) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances nor shall the waters emit objectinable odours:
(d) The natural colour and clarity of the water shall not be changed to a conspicuous extent:
(e) The dissolved oxygen content in solution in the waters shall not be reduced below 5 milligrams per litre:
(f) Based on not fewer than 5 samples taken over not more than a 30-day period, the median value of the total coliform bacteria content of the waters shall not exceed 70 per 100 millilitres.
(g) *Repealed by s. 30(d), 1973 No. 24.*

[SIXTH SCHEDULE

STANDARDS FOR CLASS SB WATERS

The quality of Class SB waters shall conform to the following requirements:
(a) The natural water temperature shall not be changed by more than 3 decress Celsius:
(b) The natural pH of the waters shall not be changed by more than 0.1 unit and at no time shall be less then 6.7 or greater than 8.5:
(c) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances nor shall the waters emit objectinable odours:
(d) The natural colour and clarity of the water shall not be changed to a conspicuous extent:
(e) The dissolved oxygen content in solution in the waters shall not be reduced below 5 milligrams per litre:
(f) Based on not fewer than 5 samples taken over not more than a 30-day period, the median value of the total faecal coliform bacteria content of the waters shall not exceed 200 per 100 millilitres.
(g) *Repealed by s. 30(e), 1973 No. 24.*

[SEVENTH SCHEDULE

STANDARDS FOR CLASS SC WATERS

The quality of Class SC waters shall conform to the following requirements:
(a) The natural water temperature shall not be changed by more than 3 decress Celsius:
(b) The natural pH of the waters shall not be changed by more than 0.1 unit and at no time shall be less then 6.7 or greater than 8.5:
(c) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances nor shall the waters emit objectinable odours:
(d) The natural colour and clarity of the water shall not be changed to a conspicuous extent:
(e) The dissolved oxygen content in solution in the waters shall not be reduced below 5 milligrams per litre:
(f) *Repealed by s. 30(f), 1973 No. 24.*

[EIGHTH SCHEDULE

STANDARDS FOR CLASS SD WATERS

The quality of Class SD waters shall conform to the following requirements:
(a) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances, or an altered acidity or alkalinity as measured by the pH, or a rise in temperature caused by the pollutant:
(b) There shall be no fouling of fishing grounds:
(c) The natural colour and clarity of the water shall not be changed to a conspicuous extent:
(d) *Repealed by s. 30(g), 1973 No. 24.*

[NINTH SCHEDULE

STANDARDS FOR CLASS SE WATERS

The quality of Class SE waters shall conform to the following requirements:
(a) There shall be no destruction of natural aquatic life by reason of a concentration of toxic substances, or an altered acidity or alkalinity as measured by the pH, or a rise in temperature by the pollutant.
(b) *Repealed by s. 30(h), 1973 No. 24.*

[TENTH SCHEDULE

STANDARDS FOR CLASS X WATERS

Applicant & Objectors etc to whom formal notification of decisions in respect of Water Right Applications Nos. 904/1-3, 933 & 934 forwarded:

Applicant:

Messrs Davys Burton Henderson & Moore
P.O. Box 248
ROTORUA Attn: Mr L.H. Moore

The District Manager
Rotorua District Council
Private Bag
ROTORUA

Objectors:

Dr J.M. Harris
16 Sophia Street
ROTORUA

Mr D. Anderson
Foster Road
Okere Falls
LAKE ROTOITI

The Secretary
Guardians of the Rotorua Lakes
P.O. Box 1765
ROTORUA

The Secretary - Accountant
Te Arawa Maori Trust Board
P.O. Box 128
ROTORUA

Mr W.J. Dyck
Forest Research Institute
Private Bag
ROTORUA

The Secretary
Nature Conservation Council
P.O. Box 12200
WELLINGTON NORTH

The County Engineer
Tauranga County Council
Private Bag
TAURANGA

Rotoma/Rotoehu Ratepayers Association
and West Rotoiti Residents
and Ratepayers Association
C/- Mrs R. Michie
R.D. 4
ROTORUA

Director of Water & Soil Conservation
P.O. Box 12 041
WELLINGTON NORTH
(Re: Submission & Objections of Water Resources Council)

Conservator of Wildlife
Department of Internal Affairs
P.O. Box 1146
ROTORUA

Mr D.F. Dunlop
R.D. 4
ROTORUA

The Secretary
Kaimai Branch
N.Z. Values Party
P.O. Box 4096
MOUNT MAUNGANUI

Mr R.K. Grant
C/- Waiariki Community College
Private Bag
ROTORUA

The Director
Production Forestry Division
Forest Research Institute
N.Z. Forest Service
Private Bag
ROTORUA

Mr R.G. Tallon
Secretary
Kaimai Canoe Club Inc
P.O. Box 2354
TAURANGA

Mr E. Furniss
115 Pandora Avenue
ROTORUA

M.S. & N. Taylor
43 Springfield Road
ROTORUA (Dear Sirs or Mesdames)

Mr P. Heke
Secretary
Owhata Maori Committee
25 Porikapa Road
ROTORUA

Mr H.R. Taylor
N.Z. Forest & Bird Society
Rotorua Branch
43 Springfield Road
ROTORUA

Mr C.O. Lee
Maraeroa Road
Mamaku
Via ROTORUA

Mr M.M. Tindall
24 Holland Street
ROTORUA

Mr N.S. Percival
4 Mark Place
ROTORUA

Mr Paul Barton
C/- Forest Research Institute
Private Bag
ROTORUA

Mr L.J.P. Williams
P.O. Box 915
ROTORUA

Mr M.J. Collins
The Patch
R.D. 4
ROTORUA

Mr T.E. & Mrs B.J. Bodley
P.O. Box 1635
ROTORUA (Dear Sir & Madam)

Mr S. Ngawhika
Chairman
Pikirangi Marae Committee
70 Koutu Road
ROTORUA

The Commissioner for the Environment
P.O. Box 10 241
WELLINGTON

SCHEDULES

FIRST SCHEDULE
THE TREATY OF WAITANGI
(THE TEXT IN ENGLISH)

HER MAJESTY VICTORIA Queen of the United Kingdom of Great Britain and Ireland regarding with Her Royal Favour the Native Chiefs and Tribes of New Zealand and anxious to protect their just Rights and Property and to secure to them the enjoyment of Peace and Good Order has deemed it necessary in consequence of the great number of Her Majesty's Subjects who have already settled in New Zealand and the rapid extension of Emigration both from Europe and Australia which is still in progress to constitute and appoint a functionary properly authorised to treat with the Aborigines of New Zealand for the recognition of Her Majesty's Sovereign authority over the whole or any part of those islands—Her Majesty therefore being desirous to establish a settled form of Civil Government with a view to avert the evil consequences which must result from the absence of the necessary Laws and Institutions alike to the native population and to Her subjects has been graciously pleased to empower and to authorise me William Hobson a Captain in Her Majesty's Royal Navy Consul and Lieutenant Governor of such parts of New Zealand as may be or hereafter shall be ceded to her Majesty to invite the confederated and independent Chiefs of New Zealand to concur in the following Articles and Conditions.

ARTICLE THE FIRST

The Chiefs of the Confederation of the United Tribes of New Zealand and the separate and independent Chiefs who have not become members of the Confederation cede to Her Majesty the Queen of England absolutely and without reservation all the rights and powers of Sovereignty which the said Confederation or Individual Chiefs respectively exercise or possess, or may be supposed to exercise or to possess over their respective Territories as the sole Sovereigns thereof.

ARTICLE THE SECOND

Her Majesty the Queen of England confirms and guarantees to the Chiefs and Tribes of New Zealand and to the respective families and individuals thereof the full exclusive and undisturbed possession of their Lands and Estates Forests Fisheries and other properties which they may collectively or individually possess so long as it is their wish and desire to retain the same in their possession; but the Chiefs of the United Tribes and the individual Chiefs yield to Her Majesty the exclusive right of Preemption over such lands as the proprietors thereof may be disposed to alienate at such prices as may be agreed upon between the respective Proprietors and persons appointed by Her Majesty to treat with them in that behalf.

ARTICLE THE THIRD

In consideration thereof Her Majesty the Queen of England extends to the Natives of New Zealand Her royal protection and imparts to them all the Rights and Privileges of British Subjects.

W. HOBSON Lieutenant Governor.

Now therefore We the Chiefs of the Confederation of the United Tribes of New Zealand being assembled in Congress at Victoria in Waitangi and We the Separate and Independent Chiefs of New Zealand claiming authority over the Tribes and Territories which are specified after our respective names, having been made fully to understand the Provisions of the foregoing Treaty, accept and enter into the same in the full spirit and meaning thereof: in witness of which we have attached our signatures or marks at the places and the dates respectively specified.

Done at Waitangi this Sixth day of February in the year of Our Lord One thousand eight hundred and forty.

[*Here follow signatures, dates, etc.*]

(THE TEXT IN MAORI)

Ko Wikitoria te Kuini o Ingarani i tana mahara atawai ki nga Rangatira me nga Hapu o Nu Tirani i tana hiahia hoki kia tohungia ki a ratou o ratou rangatiratanga me to ratou wenua, a kia mau tonu hoki te Rongo ki a ratou me te Atanoho hoki kua wakaaro ia he mea tika kea tukua mai tetahi Rangatira—hei kai wakarite ki nga Tangata maori o Nu Tirani—kia wakaaetia e nga Rangatira maori te kawanatanga o te Kuini ki nga wahikatoa o te wenua nei me nga motu—na te mea hoki he tokomaha ke nga tangata o tona Iwi Kua noho ki tenei wenua, a e haere mai nei.

Na ko te Kuini e hiahia ana kia wakaritea te Kawanatanga kia kau ai nga kino e puta mai ki te tangata Maori ki te Pakeha a noho ture kore ana.

Na, kua pai te Kuini kia tukua a hau a Wiremu Hopihona he Kapitana i te Roiara Nawi hei Kawana mo nga wahi katoa o Nu Tirani a tukua aianei amua atu ke te Kuini e mea atu ana ia ki nga Rangatira o te wakaminenga o nga hapu o Nu Tirani me Rangatira atu enei ture ka korerotia nei.

KO TE TUATAHI

Ko, nga Rangatira o te wakaminenga me nga Rangatira katoa hoki ki hai i uru ki taua wakaminenga ka tuku rawa atu ki te Kuini o Ingarani ake tonu atu—te Kawanatanga katoa o o ratou wenua.

KO TE TUARUA

Ko te Kuini o Ingarani ka wakarita ka wakaae ki nga tangata katoa o Nu Tirani te tino rangatiratanga o o ratou kainga me o ratou taonga katoa. Otiia ko nga Rangatira o te wakaminenga me nga Rangatira katoa atu ka tuku ki te Kuini te hokonga o era wahi wenua e pai ai te tangata mona te Wenua—ki te ritenga o te utu e wakaritea ai e ratou ko te kai hoko e meatia nei e te Kuini hei kai hoko mona.

KO TE TUATORU

Hei wakaritenga mai hoki tenei mo te wakaaetanga ki te Kawanatanga o te Kuini—Ki tiakina e te Kuini o Ingarani nga tangata maori katoa o Nu Tirani ka tukua ki a ratou nga tikanga katoa rite tahi ki ana mea ki, nga tangata o Ingarani.

(Signed) W. Hobson,
Consul & Lieutenant Governor.

Na ko matou ko nga Rangatira o te Wakaminenga o nga hapu o Nu Tirani ka huihui nei ki Waitangi ko matou hoki ko nga Rangatira o Nu Tirani ka kite nei i te ritenga enei kopu, ka tangohia ka wakaaetia katoatia e matou, koia ka tonungia ai o matoa ingoa o matou tohu.

Ka meatia tenei ki Waitangi i te ono o nga ra o Pepueri i te tau kotahi mano, e waru rau e wa te kau o to tatou Ariki.
